Transactions
of the
Wyoming State Medical Society

May and Nov.
1898

....TRANSACTIONS....

OF
THE

WYOMING
STATE MEDICAL SOCIETY.

First and Second Regular Meetings,

HELD AT

Rawlins and Rock Springs,

May and Nov., 1898.

CONSTITUTION, BY-LAWS
AND LIST OF MEMBERS.

PUBLISHED FOR THE SOCIETY.

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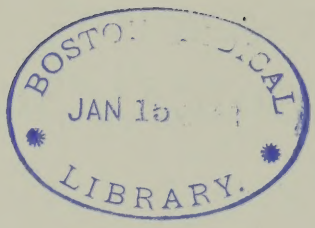

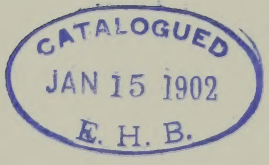

President Wyoming State Medical Society.

E. STUVER, M. D.,

Secretary Wyoming State Medical Society.

PREFACE.

On presenting this volume, containing the transactions of the First and Second Regular Meetings of the Wyoming State Medical Scciety, I desire to congratulate the profession of the State on the splendid start that has been made to unify and strengthen the medical profession and bring its regular members together into a strong organization for the advancement of Scientific Medicine, the alleviation of human suffering and the stamping out of diseases.

Already fully 50 per cent. of the regular physicians of the State have been enrolled as members of the society; a proportion which I believe will compare favorably with any state medical society in the United States, no matter how old it may be.

This, together with the interest evinced by the members, and the high order of the papers presented at our Rock Springs meeting, indicate that no effort will be spared to place the Wyoming State Medical Society in the front rank of state medical societies.

Neither the Society nor the Editor assumes any resposibility for the views or opinions as enunciated in the various papers and discussions.

With our vigorous young society as the rallying point for all that is best and noblest in the medical profession, let us, in the words as quoted by our own beloved Longfellow,

"Look not mournfully into the Past;
It comes not back again.
Wisely improve the Present, it is thine.
Go forth to meet the Shadowy Future,
Without fear and with a manly heart."

E. STUVER,
Secretary and Editor.

FORT COLLINS, COLORADO,
March 11, 1899.

CONTENTS.

First Annual Meeting

OF THE

Medical Society

OF THE

STATE OF WYOMING.

Held at Rawlins, Wyoming, May 13, 1898.

Portland, Oregon:
MEDICAL SENTINEL PRINT,
1898

OFFICERS.

President, ...Dr. R. HARVEY REED, Rock Springs
First Vice-President, ...Dr. JACOB W. HAWK, Green River
Second Vice-President, ...Dr. J. C. HAMMOND, Hanna
Third Vice-President, ...Dr. W. C. C. FREEMAN, Rock Springs
Secretary and Editor, ...Dr. E. STUVER, Rawlins
Treasurer, ...Dr. H. M. BENNETT, Rawlins

OFFICIAL CALL OF WYOMING STATE MEDICAL SOCIETY.

Rawlins, Wy., April 29, 1898.

Dear Doctor: Every year more fully demonstrates the absolute necessity of a closer organization and firmer union of the medical profession in order to promote its material as well as its scientific interests. In view of the fact that nearly every state and territory of our Nation, except Wyoming, has an active medical society to look after the welfare of the medical profession, and believing that the present is a most auspicious time, and that it is the duty of the medical profession of our state to organize a State Medical Society, so that we shall be entitled to delegate representation in the American Medical Association at its coming meeting in Denver, June 7th, we, the undersigned, do hereby issue a call for a meeting of the regular physicians of Wyoming to be held in Rawlins, May 13th, at 10 o'clock, a. m., for the purpose of organizing a state medical society, or reorganizing the one which has lain dormant for so many years.

You are urgently requested, if possible, to be present at the meeting, but if you cannot be with us, send in your application for charter membership at once.

Signed: E. STUVER, M. D.
THOS. G. MAGHEE, M .D.

Pursuant to the above regularly issued call physicians from various parts of the state met in the parlor of the Union Pacific Hotel, at Rawlins, Wyoming, May 13th, for the purpose of organizing a state medical society.

The meeting was called to order and the call read by Dr. E. Stuver, temporary secretary. The meeting then proceded

to the consideration of a constitution and by-laws, which after a free discussion was adopted subject to alterations and amendments at the next regular meeting, which will be held in Rock Springs, Nov. 1, 1898.

The following officers were then elected to serve until the next annual meeting, viz.:

President, Dr. R. Harvey Reed, Rock Springs; first vice president, Jacob W. Hawk, Green River; second vice president, J. C. Hammond, Hanna; third vice president, W. C. C. Freeman, Rock Springs; secretary and editor, E. Stuver, Rawlins; treasurer, H. M. Bennett, Rawlins. Drs. R. Harvey Reed, E. Stuver and J. C. Hammond were elected delegates to the American Medical Association. Alternates, Drs. W. C. C. Freeman, Jacob W. Hawk and W. W. Cook.

The following committees were then elected, viz.:

Executive—J. C. Hammond, ex-officio; E. E. Levers, C. H. Solier.

Admission and Medical Societies—Jacob W. Hawk, James Carter, Frank Dunham.

Program—President, secretary, ex-officio; treasurer.

Legislature—R. Harvey Reed, C. H. Solier, W. W. Crook.

Ethics—James Carter, James Lane.

Necrology—Robert C. Chamberlain, G. N. Russell, Frank Dunham.

No other business appearing, the society adjourned to meet in Rock Springs, November 1st, 1898.

E. STUVER, Secretary.

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CONSTITUTION OF THE WYOMING STATE MEDICAL SOCIETY.

ARTICLE I.

Name.

This association shall be known as the Wyoming State Medical Society.

ARTICLE II.

Objects.

The objects of this society shall be the maintaining and upbuilding of a high standard of the medical profession throughout the State, the preparing, reading and discussion of papers on medical, surgical and allied subjects, the report of cases and social advancement.

ARTICLE III.

Membership.

Section 1. Its members shall consist of active and honorary members. Active members shall be residents of the State at the time of their election, and shall be graduates of some regular, reputable medical college, and shall sign the constitution of this society before they are eligible to franchise and shall pay an annual assessment of not less than one nor more than five dollars, at the discretion of the society, which sum shall be regulated at each annual meeting.

Sec. 2. Honorary members shall consist of distinguished members of the profession who shall be elected as hereinafter provided for.

Sec. Application for active membership shall be made in writing and supplemented by the written approval of at least two active members who have personal knowledge of the professional standing of the applicant.

Sec. 4. Honorary members shall be recommended by at least two active members in good standing, and no honorary member shall be elected to this society who has not distinguished himself in some special manner in the advancement of the medical and surgical sciences.

Sec. 5. Not more than five honorary members shall be elected in any one year, and the limit of honorary members shall not exceed fifty.

Sec. 6. Honorary members shall have the same privileges as active members, except the right of franchise, and shall be exempt from any dues or assessments.

ARTICLE IV.

Meetings.

Section 1. This society shall meet annually the first Tuesday of November, unless otherwise ordered by the society at a regular meeting of the same, but special meetings may be called by the president and secretary on the written application of five members stating the object of said special meeting, at which time no business shall be transacted except that mentioned in the call for the same, and no special meeting shall be called without giving each active member a written notice thereof at least two weeks prior to the time of said meeting.

Sec. 2. Five members shall constitute a quorum for the transaction of business, provided every member shall vote in the affirmative on questions of expenditure of money, disciplining a member or changing the constitution.

ARTICLE V.

Penalty.

Section 1. Upon sufficient showing that a member of this society has been willfully guilty of gross violation of the constitution and by-laws of the same, or any form of unprofessional conduct, the executive board may recommend that his resignation be requested, or move his suspension or expulsion, a majority vote of the members present at a

regular meeting being necessary to fix the penalty, after said member has had a fair and impartial trial before the committee on ethics.

ARTICLE VI.

Code of Ethics and Parliamentary Rules.

Section 1. The code of ethics of the American Medical Association is hereby adopted by this society.

Sec. 2. Robert's Rules of Practice are hereby adopted for the parliamentary regulations of all meetings of this society when not otherwise specified in its constitution and by-laws.

ARTICLE VII.

Officers.

Section 1. The officers of this society shall consist of a president, three vice-presidents, secretary and editor, a treasurer and executive committee of three; a committee on admissions and medical societies of three; a committee on program and printing, of three; a committee on necrology, of three; all of whom shall be elected as hereinafter provided for.

Sec. 2. All officers shall be elected by ballot, except when otherwise provided for.

Sec. 3. The retiring president shall be ex-officio a member of the executive committee for the following year and one member of said committee shall be elected by ballot each year to serve for two years.

Sec. 4. The members shall be elected by ballot annually to serve on each standing committee, except the executive committee, which shall serve for a term of three years, except that at the meeting held at Rawlins, May 13th, 1898, one member shall be elected to serve until the first Tuesday of November, 1898; one member shall be elected to serve until the first Tuesday of November, 1899; one member shall be elected to serve until the first Tuesday of November, 1900.

Sec. 5. All officers shall serve until their successors are duly elected and have signified their acceptance of the same.

ARTICLE VIII.

Duty of Officers and Committees.

Section 1. The president shall preside over all meetings in accordance with this constitution and by-laws, and deliver an annual address.

Sec. 2. The vice-presidents shall preside in the order of their rank in the absence of the president or at his request when present.

Sec. 3. Secretary and Editor.—The secretary shall keep a correct record of all the proceedings of this society, and make a report of the same at each annual meeting, which shall be referred to the executive committee, and do such correspondence as shall be deemed necessary for the interest and progress of the society.

He shall also edit and prepare all manuscripts for publication, read galley and form proofs of the same, and furnish each member who has read and discussed a paper a galley proof of the same when so request-

programs, procure the necessary stationery for the officers and keep the seal of the society, and perform such other duties as may be assigned him and submit a written report at each annual meeting.

Sec. 4. Treasurer.—The treasurer shall collect all dues and make an itemized report of the same at each annual meeting, which shall be referred to the executive committee. He shall also report to the secretary the names of all new members, together with those who have paid their annual dues for the year; also those who are delinquents, giving the names and addresses of the same, the first of each month.

He shall keep a correct record of all money received and disbursed, and shall expend no money except on the written order of the secretary and president. He shall also render a receipt to each member, paying his dues or assessments, and keep a stub of the same, each of which shall indicate the amount paid, and the time covered by the same, and take a receipt for all money expended, which shall be accompanied by a written order authorizing the payment of the same. He shall give a bond of the sum requested by the society.

ARTICLE IX.

Section 1. Committees.—The committees of this society shall be standing and temporary.

Standing committees are those whose duties shall continue from year to year, and shall consist of five separate committees, as hereinbefore designated.

Temporary committees are those whose functions cease at the meeting at which they are appointed. They shall be appointed by the president, unless otherwise provided for, as the necessity of their existence arises.

Sec. 2. Duties of the Committees.—The executive committee shall have general supervision of the affairs of the society. It alone shall have the power to move expulsion or suspension of any member of the society for alleged offense against this constitution and by-laws when the evidence for the same has been submitted to them by the committee on ethics; it shall act as a committee on credentials, hold any necessary meetings in the interval between sessions, and its action shall be deemed the action of the society unless reversed by that body; it shall have general charge of all the monetary affairs of the society, audit all bills, together with the books of the treasurer, and shall recommend each year the amount of annual dues or special assessments necessary for the maintenance of the society and the publication of its proceedings.

Sec. 3. The committee on admissions and medical societies shall examine and pass upon the qualifications of delegates and applicants for permanent membership and submit their credentials for the approval of the executive committee, and on approval of the same shall report the applicants or medical societies for election provided the credentials are satisfactory.

Section 4. The committee on program and printing shall consist of the president, secretary and editor, and treasurer, and shall exam-

ine all papers presented to the society and have printed in the transactions such as it deems worthy of publication, order the printing of programs, notices, and such other literature as may be deemed necessary for the interest of the society or ordered by the same.

Sec. 5. The committee on Legislature shall watch the course of the state legislature on medical subjects, and take charge of such medical and allied subjects and such matters as shall be referred to it by the society. All proposed medical legislation offered by any member of the society and all resolutions touching medical legislation shall be referred to this committee, which shall make a report thereon to this society as soon as possible after said material has been submitted to them for their consideration.

Sec. 6. The committee on ethics shall examine and report for the action of the society any member, charged in writing, with any violation of the provisions of this constitution and by-laws. A copy of such charges shall be furnished to said member, and the accused and accuser sha.. appear before the committee at a date fixed by the society, when it shall proceed to hear the case and submit the testimony of the same to the executive committee as hereinbefore prescribed .

Sec. 7. Committee on Necrology.—It shall be the duty of the committee on necrology to keep itself advised regarding the death of any member of this society,and make a proper report of the same at each annual meeting.

ARTICLE X.

Amendments.

Section 1. Every proposal for amending the constitution shall be made in writing, and if such an amendment receives a majority of four-fifths of a quorum, it shall be adopted, but otherwise the amendment shall lie over until the next meeting, when it may be adopted by a majority of two-thirds of the members present.

BY - LAWS.

I.

Order of Business.

1. Call to order.

2. The minutes of each session shall be read, and if necessary corrected and approved prior to the proceedings of the next session.

3. The time for the president's address shall be fixed by the committee on program.

4. The election of officers shall be held the afternoon of the last day of the meeting.

5. The selection of a place for the ensuing meeting shall be made immediately after the election of officers.

6. Business which requires early consideration.

7. Reports of Standing Committees.

8. Report from the delegates to the American Medical Association and other societies.

9. Regular program of papers and their discussions.

10. Report of cases, exhibition of patients, specimens, apparatus, etc.

11. New business.

12. Unfinished business.

13. Miscellaneous business.

14. Adjournment.

II.

Temporary Committees.

As soon as practical after his election, the president shall appoint a committee of arrangements, consisting of not to exceed five members, and if no sufficient reason prevent, said committee shall largely be composed of members at the place where the next annual meeting is to be held. The said committee shall provide suitable rooms and accommodations for the meeting of the society, arrange for such entertainment as they may deem in the interest of the society at all times.

III.

It shall be the duty of the president, not later than the second session of the meeting, to appoint a committee on nominations, consisting of three members, whose duty it shall be to submit a list of names proposed for the officers provided for in this constitution

IV.

Not to exceed twenty (20) minutes shall be allowed for the reading of any paper without special permission.

V.

No paper shall occupy over thirty (30) pages of the transactions without special permission of the society or executive committee.

VI.

All reports, papers and addresses presented to this society by its members shall be the property of said society, and shall be referred without motion and without recommendation to the committee on program and printing, and it shall be considered a misdemeanor for the author of any such report or paper to permit the same to be published without giving due credit to this society.

VII.

No one participating in the proceedings shall be allowed to speak at two different times on the same subject without the consent of the society.

VIII

The time allowed each speaker shall not exceed ten minutes except by general consent.

IX.

Any of these by-laws may be amended at any time by a three-fourths vote of the members present. Every proposed amendment must be offered in writing, and if it receives a four-fifths vote of the members present, it shall be adopted; but otherwise, shall lie over until the next meeting, when it may be adopted by a majority of two-thirds of the members present.

MINUTES of the SECOND REGULAR MEETING

OF THE

WYOMING STATE MEDICAL SOCIETY,

HELD AT

ROCK SPRINGS, WYO.,

November 1, 1898.

The second regular meeting convened in Rock Springs, November 1st, 1898. Met in the city hall at 10 o'clock a. m., and was called to order by the president, Dr. R. Harvey Reed.

The minutes of the last regular meeting were read and approved.

The mayor, Hon. W. K. Lee, delivered a felicitous address of welcome, and extended the hospitality of the city to the society.

The address of welcome was responded to by Dr. C. H. Solier, who thanked the citizens of Rock Springs for their courtesies and made a strong plea for the organization of the medical profession and a closer union of its members.

In the absence of Drs. J. C. Hammond and E. E. Levers the president appointed Drs. J. H. Maynard and J. W. Hawk to fill the vacancies on the executive committee. This committee then took up the applications for charter membership and the following were recommended for membership, and the report was unanimously approved by the society.

List of charter members: E. Stuver, W. W. Crook, Charlotte G. Hawk, Jacob W. Hawk, R. Harvey Reed, W. C. C. Freeman, Ernest E. Levers, Robert C. Chamberlain, G. M. Russell, James Lane, Frank Dunham, C. H. Solier, James Carter, M. H. Verpoorten, H. M. Bennett, J. C. Hammond, R. W. Hale, John H. Lott, W. L. Johnson, John F. Leeper, George G. Verbryck, L. A. Gates, F. Horton, Allen F. Miller, Wm. A. Jolley, Arthur V. Stoughton, H. A. Abbott, J. B. Weaver, J. E. Osborne, H. J. Maynard.

At the afternoon session the following additional applications were approved, viz: George P. Johnson, E. P. Rauch.

Dr. J. W. Hawk, first vice president, was then called to the chair and the president, Dr. Reed, read his presidential address, "The Importance of Closer Scientific and Fraternal Relations."

It was moved by Dr. Solier, and duly seconded, that a vote of thanks be extended to Mayor Lee. Carried.

It was moved by Dr. Maynard, and seconded by Dr. Solier, that the application of Dr. A. E. White, together with his initiation fee, be returned to him. Carried.

Dr. Chamberlain then read his paper on "Foxtail Infection." In order to give the society an opportunity to see the case before discussing the paper, it was moved, duly seconded and carried that the discussion be postponed and that we proceed with the transaction of important business to come before the society.

A letter from Congressman John E. Osborne to the president, R. Harvey Reed, suggesting that the society adopt strong resolutions condemning the pending anti-vivisection bill (Senate Bill 1063); also favoring the reorganization of the United States Army Medical Department on an independent basis with a medical officer in the President's cabinet at its head, and pledging himself to use his influence in securing such desirable ends, was read and it was moved, duly seconded and unanimously carried that the president and secretary prepare suitable resolutions on these subjects. Accordingly the following resolutions were prepared and adopted by the society, viz.:

On the anti-vivisection question: Whereas, many of the great discoveries as to the causation, the prevention and the cure of diseases as well as the advancement of sanitary science and the greatly lowered death rate among civilized nations are largely due to experiments on living animals; and,

Whereas, the bill now pending in the United States Senate (Senate Bill 1063), or any similar legislation, if enacted into law will greatly obstruct and hamper scientific investigators in their work and tend to prevent life-saving discoveries in the future.

Be it therefore resolved, that we, the Wyoming State Medical Society, in regular session assembled, do hereby condemn Senate Bill 1063 and strongly protest against its passage and urge upon our representatives in Congress and the United States Senate,as well as all friends of progress, to use every honorable means to secure its defeat, and the defeat of any similar measure that may hereafter be introduced.

(Signed) R. HARVEY REED,
E. STUVER,
Committee.

On a Department of Public Health:

Whereas, the progress and happiness of a nation are largely dependent on the health and physical integrity of its people; and,

Whereas, the protection of our country against the introduction of infectious and contagious diseases and the advancement of sanitary science can only be accomplished under the direction and control of sanitary experts:

Be it therefore resolved, that we, the Wyoming State Medical Society, in regular session assembled, do hereby recommend the establishment of a public health department under the direction and control of a medical expert, who shall be a member of the President's cabinet.

And the following resolutions condemning the Behring patent on diphtheria antitoxin were then unanimously adopted, viz.:

Whereas, prevailing conditions of patent and trade-mark laws enable any one to secure proprietary rights to chemical compositions associated with or without trade-marks, thereby inflicting an injustice upon the American people; and,

Whereas, under our lax laws Professor Emil Behring and his agents have secured a patent on diphtheria antitoxin:

Resolved, that the State Medical Society of Wyoming expresses its unqualified condemnation of the course pursued by Professor Emil Behring and the Farbwerke of Hoechst-on-the-Main, Germany, in securing a United States patent on diphtheria antitoxin, and that this society regards such action as a violation of professional ethics, as an injustice to the medical profession, and as an imposition upon the American public.

Resolved, that this society earnestly reprobates the prevailing laxity in our patent laws, which bestow upon foreigners special privileges, concessions and monopolies that they cannot secure in their native lands.

Resolved, that while it is the duty of our government to encourage invention, it is eminently unjust and contrary to public policy to grant perpetual property in a trade-mark name and to accord patents on the chemical composition of medicinal substances, thus preventing their manufacture by other processes or their sale under different names.

Resolved, that copies of these resolutions be transmitted to the members of the commission appointed by President McKinley for the revision of the United States patent and trade-mark laws, namely, Mr. Francis Forbes of New York city, Hon. Arthur P. Greeley, assistant commissioner of patents, Washington, D. C., and Hon. Peter Grosscup, Chicago, Illinois.

Resolved, that we commend the action of the American manufacturers of antitoxin who have agreed to protect the profession in the use of their serum, and recommend the use of the American product in preference to Behring's.

AFTERNOON SESSION.

The report of the delegates to the American Medical Association meeting in Denver last June was then called for. No writ-

ten report was presented but Drs. Stuver and Reed reported that our society had been duly recognized by the American Medical Association, with which organization we are now in affiliation. They also reported that Wyoming's full delegation presented papers to and took part in the discussions before a number of the sections.

The society then proceeded to the election of officers and the following were unanimously chosen, viz.:

President, R. Harvey Reed, Rock Springs; First Vice President, H. J. Maynard, Cheyenne; Second Vice President, George G. Verbryck, Cambria; Third Vice President, E. E. Levers, Almy; Secretary and Editor, E. Stuver, Rawlins. For Treasurer, Drs. C. H. Solier of Evanston and J. F. Leeper of Casper were placed in nomination, and a ballot being taken, Dr. Solier received six votes and Dr. Leeper two votes, whereupon Dr. Solier was declared elected Treasurer for the ensuing year.

The following committees were then elected, viz.:

Executive Committee—R. Harvey Reed, ex officio; C. H. Solier, 1899; George P. Johnson, 1900.

Admission and Medical Societies—J. W. Hawk, James Carter, Frank Dunham.

Legislature—R. Harvey Reed, C. H. Solier, George G. Verbryck.

Ethics—James Carter, Allen F. Miller, J. F. Leeper.

Necrology—F. Horton, J. C. Hammond, W. C. Freeman.

The following delegates and alternates to the American Medical Association meeting to be held in Columbus, Ohio, next June were then unanimously elected, viz.:

Delegates—R. Harvey Reed, E. Stuver, H. J. Maynard;
and the secretary was empowered to select the fourth delegate:

Alternate—W. C. C. Freeman;
and the secretary was empowered to select three alternates, to fill the vacancies.

It was moved by Dr. Solier, duly seconded and unanimously carried that Laramie City be selected as the next place of meeting.

It was moved, seconded and unanimously carried that the next meeting convene on the second Tuesday of October, 1899.

It was moved, seconded and carried that the society next year hold a two days' session, beginning at 2 o'clock the first day. The society then proceeded with the reading of papers.

"Autointoxication" was read by E. Stuver and discussed by Drs. Maynard, Charlotte Hawk and Solier and the discussion closed by Stuver.

Dr. Chamberlain's paper was then discussed by Drs. Solier, Reed, Maynard and Chamberlain.

Dr. Solier next read his paper on "The Prophylaxis of Puerperal Infection." The paper elicited an interesting discussion, which was participated in by Drs. Freeman, Charlotte Hawk, Stuver and Reed.

As the time for adjournment was approaching, it was moved by Dr. Maynard, duly seconded and carried, that the papers of Drs. Russell, Levers, Leeper, Jolley and Betts be read by title and referred for publication.

It was moved, seconded and after some discussion carried, that the fees for the ensuing year be fixed at $1.

It was moved, seconded and carried that the Program and Printing Committee (president, secretary and treasurer) are hereby instructed to make the most favorable arrangements for the publication of the transactions of the society.

It was moved, seconded and unanimously carried that a vote of thanks be extended to Dr. H. W. Coe for courtesies shown towards the society in printing the transactions of our last meeting.

It was moved, seconded and unanimously carried that Drs. Maynard, Solier and Jacob Hawk be elected a committee to prepare a vote of thanks to the citizens of Rock Springs for their hospitality.

The following resolutions were presented and unanimously adopted by the society, viz.:

We, the undersigned committee on resolutions appointed at a meeting of the Wyoming State Medical Society, do hereby express our thanks to the authorities and citizens of Rock Springs for the kind, generous and whole-souled reception and entertainment given us on the occasion of our annual meeting.

(Signed) H. J. MAYNARD.
C. H. SOLIER.
J. W. HAWK.

It was moved by Dr. Solier and seconded by Dr. Maynard that a vote of thanks be extended to the officers of the society for the efficient manner in which they have performed their duties. Unanimously carried.

No other business appearing, the society then adjourned to meet in Laramie City the second Tuesday in October, 1899.

Between the sessions the members of the society were taken to the Wyoming State Hospital, where they had the pleasure of seeing many interesting cases which are being excellently cared for under the able management of Dr. Reed, with the assistance of Drs. Chamberlain and Ranch and a corps of trained nurses.

From the hospital the members of the society were taken to the Commercial hotel, where they were royally entertained at lunch by Dr. W. C. C. Freeman.

In the evening Dr. Reed and his amiable wife gave an elegant reception at their home in honor of the occasion. Here we had the pleasure of meeting a large number of the very best people of Rock Springs, and it is needless to say that the affair was a most enjoyable one and highly appreciated by every one present.

After the reception a grand ball was given in the Opera House in honor of the society. A large and brilliant company was present, care was thrown to the winds and enjoyment was the watchword of the hour.

Thus ended a most successful and enjoyable meeting, one which will ever remain a red letter day of the Wyoming State Medical Society.

E. STUVER, Secretary.

PRESIDENT'S ADDRESS.

THE IMPORTANCE OF CLOSER SCIENTIFIC AND FRATERNAL RELATIONS.

By R. HARVEY REED, M.D.,

Superintendent and Surgeon-in-Charge, Wyoming General Hospital; Member American Medical Association, American Academy of Railway Surgeons; Rocky Mountain Inter-State Medical Association; The Western Surgical and Gynecological Association, Etc.

Rock Springs, Wyoming.

For ages medicine has been lauded by fiction and song as the noblest of all professions, and yet it is a lamentable fact that its members are the object of ridicule, largely by those who know the least about them on the one hand, and on the other by those who know the most about them. Paradoxical as it may seem, we regret it is true, and while the attorney contests the right of his client to the bitter end, before the bar, the moment his case is closed he is a bosom friend of his antagonist, and clasps him with the right hand of fellowship and opens his heart to him in the hour of distress.

The ministry has its dissensions on questions of orthodoxy, and while they disagree as to the beliefs and teachings of the Holy Writ, yet, as a profession at large, they stand together for one cause regardless of their friends or foes. Why is it that the physician and surgeon is made the object of ridicule, not only by the public but by the press, and the oft-repeated adage by Pope, "Who shall decide when doctors disagree?" is quoted to their discredit and disgrace.

In studying the history of medicine we learn that it has come down from the days of Galen and Esculapius, and at that time books and literature of all kinds in reference to medicine was practically unknown, and the student of medicine was obliged to learn from his master, and his master in turn was obliged to learn from experience, which was confined to his own circle of observation, and as a consequence it begot narrow-mindedness and lacked the broad expanse which the student of to-day has the pleasure of enjoying. Each of the great masters thought that he, and he only, was right, and the followers of each likewise lauded

the one and scorned the other. This condition of affairs is most lucidly set forth by the poet in the oft-repeated couplet:

"A little learning is a dangerous thing,
Drink deep, or taste not the Pierian spring."

Gradually, however, the medical profession has steadily evolved from this chaotic condition of empiricism into a broad expansive field of scientific advancement. Instead of a two years' course of six months each, which was given the tyro who was taken from his humble field of labor, without a reasonable foundation of a generous education, we have now a four years' course of nine months each in all the best medical colleges of the land, and instead of the old classical seven branches of anatomy, physiology, chemistry, materia medica, obsterics, surgery and medicine, we have the number of studies more than quadrupled. The student of to-day must delve into the mystery of bacteriology, seeking the cause of the disease produced by numerous vegetable organisms that cause typhoid fever, diphtheria, yellow fever and a score of other diseases that are well known to those who are versed in the science of modern medicine. Nay, he can not stop there; he must proceed to search through the distorted cells, the result of disease, and learn from their pathological conditions how the various parts of the human economy produce certain symptoms and their inevitable results. He must familiarize himself with embryology as well as obsterics. He must study physiological chemistry as well as the chemistry of the inorganic and organic world. He must delve into the mysteries of histology and not content himself with the mere symptoms that present themselves at the bedside.

The abdominal cavity is the common field for the gynecologist and the general surgeon, who, instead of allowing his patient to die from benign tumors or obstruction of the intestinal tract, have no hesitancy in opening this once sacred cavity and removing the pathological conditions, and in the last few years they have not only practically reduced it to a science, but have saved thousands of lives and ameliorated the sufferings of humanity beyond human comprehension.

This being the fact, it is high time that they should cast aside these petty jealousies that arise principally from ignorance, and close their eyes to these ignoble dissensions, and seek a closer scientific and fraternal relation. It lies with them to eradicate

this evil and instead of being the object of ridicule, they have within themselves the power to unite and stand firm against any other profession in the civilized world. Yea, they have learned this by the incessant burning of the midnight oil, by the never-ending investigation, by the discoveries of such men as Koch, Pasteur and Esmarch of the old world, and Rush, McDowell, Gross, Morton, Agnew and Senn of the new world, who, with many others, have immortalized themselves in their ardent, self-denying, conscientious study for the advancement of scientific medicine, and who have made it possible for you and me to adopt for ourselves the lines of Adams, who said:

Fifty years of strong progression!
  Half a century of rise!
Noblest in a great profession,
Highest far, by all confession,
  But gentle as thy name implies.

In the midst of Time's swift eddy,
  Fraught with wrecks of human life;
Thy figure stands out strong and steady,
For thy duty calm and ready,
  Never blinded by the strife.

In the language of the Pacific Medical and Surgical Journal, "At no moment in the world's history was so much mental power directed in the channel of medical study; never were there so many giant intellects laboring to advance the various departments of medical science."

It is an easy matter for us to find excuses for not attending medical societies. It is an easy matter for us to find excuses not to meet our brothers in consultation, but it is just as easy to reverse this order, and be willing and ready, nay, anxious for both, for he who shuts himself up in his own little circle, and excludes himself from the associations of his fellow practitioners, denies himself the pleasure of the advancement obtained by the attending of medical societies, numerous as they may be, digs for himself his own grave in which he will be buried by an avalanche of his own bigotries. It is true there are exceptions to these general principles, and some of our best men are in such circumstances as to make it impossible for them to attend the scientific and social functions of our medical societies. But these are exceptions to the rule, and it is said that exceptions to the rule only prove its truth.

The science of medicine should recognize no geographical bounds. It should

> "Seize upon truth where'er 'tis found,
> Among your friends, among your foes,
> On Christian or on heathen ground:
> The flower's divine where'er it grows."

We realize in the newer states of the Union and in the so-called "Wild and Woolly West," where the members of the profession of necessity are widely separated from each other, that it is impossible for them to enjoy the daily intercourse which is afforded the members of the medical profession in the crowded states of the East, but this very fact has made the members of the profession in the West independent instead of dependent, as they are found in the East, notwithstanding it considers itself the Nestor of medical education, for here they are compelled to depend upon themselves and only in extreme circumstances are they able to call in counsel or mingle with the fellow members of the profession and consult over important cases, whereas in the East, where the profession is overcrowded, the student looks to his professor the moment he encounters a hard case, and depends upon him to bear the burden and responsibility, while he himself becomes a menial slave to dependency instead of independency.

Dr. Norcom, in an address before the Medical Department of the University of Pennsylvania on March 4, 1878, said:

"Think for yourselves and cultivate self-reliance. Your patients will not have confidence in you unless you show them that you have it in yourselves, which you cannot do unless you possess the knowledge their cases require. Be truth-lovers and you will be truth-seekers. In this way only can you avoid the influences to which we are all more or less exposed."

The fact that circumstances have excluded to a certain extent professional intercourse makes it all the more important and enjoyable when we have an opportunity to meet and consult with each other over those matters which are of common interest to our profession. It has been my observation that owing to the attenuated condition of the medical profession in many parts of the West it has kept up to the times by taking the best medical journals published, and the progressive members of the profession are all supplied with the latest publications from our best authors. Yet it is to be regretted that there are still some who fail to

realize the importance of closer scientific and fraternal relations, and, like Lucifer, live, "Never to hope again."

Again there is another class of our profession who avoid so fas as possible a consultation with a brother practitioner, or when they do they feel that it is either their duty to disagree with him or live in mortal fear that he will disagree with them. This is a mistake and tends to the depreciation of the medical profession.

My fellow-members of the Wyoming State Medical Society, permit me to admonish you never to refuse a consultation. It gives you strength and standing before the laity, and every consultation should be in the interest of the patient; every true member of the medical profession should be above anything that smacks of selfishness. Consultations should be purely scientific, investigating the facts, and then as judge of the court, arrive at a decision, based on the testimony before you, and do not fear each other, for if you are up in your profession, as a rule, you cannot but arrive at the same conclusion in the more common forms of disease, while on the other hand, in that class of cases which is deceptive to the best you cannot be criticised justly for having a different opinion from that of your fellow practitioner, and if you have it is no disgrace to you, but it should stimulate you to higher and greater efforts in the study of your noble profession. Remember the words,

> "Our doubts are traitors,
> And make us lose the good we oft might win
> By fearing to attempt."

Never take a different opinion to heart, but always bear in mind that the same symptoms in doubtful cases may lead you to have one opinion while your brother practitioner may be just as honest as you in having another. This, however, should never be allowed to cause enemies, for it is this very fact that depreciates you in the eyes of the public, which never stops to think that there is no end to the advancement of the medical and surgical sciences, and notwithstanding it has made greater progress during the last fifty years than any other science known to the world, it is still not infallible, and for this reason it is our duty to ourselves and our patrons to continue to burn the midnight oil and never give up our task until life shall cease to exist. In this way, and only this way, can the importance of closer scientific and

fraternal relations be thoroughly appreciated. We must remember that

"The world's a room of sickness, where each heart
Knows its own anguish and unrest,
The truest wisdom, then, and noblest art,
Is his who skills of comfort best;
Whom by the softest step and gentlest tone
Enfeebled spirits own,
And love to raise the languid eye
When, like an angel's wing, they feel him flitting by."

Notwithstanding the state of Wyoming has medical laws that are in many respects better than those of some of its sister states, yet this is no reason why it should not take advantage of the best, and by so doing encourage closer scientific and fraternal relations, by amending our laws so that hereafter no one shall be admitted to practice medicine or surgery in any form in this great state without having graduated at a reputable medical college recognized by the Association of Medical Colleges of the United States or the National Confederation of State Medical Examining and Licensing Boards. Yes, further I would recommend the passing of a law creating a State Board of Health, which shall be vested not only with the power of examining into the qualifications of every physician or surgeon who shall knock at our door for admission to the medical profession of this state, but at the same time have under their care the sanitary and hygienic conditon of its citizens. On this question I can speak from experience, for notwithstanding my native state is one of the leading states in the Union from a commercial and political standpoint, yet it was only within the last few years that the medical profession of Ohio were granted laws which looked to the advancement of the medical and surgical sciences, and consequent protection of the citizens of that great commonwealth from the intrigue of charlatans and quacks. Truly are delays dangerous in this connection, for as state after state in the Union passed laws compelling the medical profession to be proficient in their calling, the scums of these states naturally flocked to other states where there was no barrier against their quackery, where they were at perfect liberty to practice their nefarious schemes at the expense of the public. Hence I repeat it that it is important that this state should be abreast with the other states and have the best medical laws in the land that will protect it and its citizens

from the schemes of the ignoramus, who only use the cloak of the medical profession as a means of gain and cares nothing for its scientific and fraternal relations,

Before closing I beg your indulgence in calling attention to the importance of the medical profession of this state in standing as one solid phalanx against the passage of a bill now pending in the Senate of the United States with a view of prohibiting vivisection, for I am sure it is not necessary for me to state to you that were it not for legitimate vivisection the United States of America, which has recently shown itself to be one of the greatest powers of the earth, would not stand as it does to-day, the leader in medicine and surgery.

We, as members of the medical profession, and our patients who patronize us and expect from us the best the world can afford, cannot tolerate the passage of any law that will take from us any possibility for the lessening of pain and the prolongation of life. Then, fellow-members, let us resolve ourselves into a committee of one and make it a point, regardless of political or religious relations, to make a personal appeal to our members of Congress and our United States senators against the passage of this nefarious law.

In closing I wish to thank the members of this, the youngest state medical society of this great country, for the honor they have conferred upon be by electing me their first president, and trust each one of you will remember, as we separate for our daily avocations, that

"Above all price of wealth
The body's jewel—not for minds profane,
Or hands, to tamper with in practice vain—
Like to a woman's virtue is man's health.

A heavenly gift within a holy shrine!
To be approached and touched with serious fear,
By hands made pure, and hearts of faith severe,
Ev'n as the priesthood of the One divine!"

AUTO-INTOXICATION.

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Weber defines auto-intoxication as a poisoning of the system by the products of its tissue metamorphosis; they may be normal products and do harm by excessive accumulation or may be abnormal, pathological, viz., either not at all or in minute particles only present in the healthy body. (Charlotte Medical Journal, Nov., 1897, p. 580.)

During the early period of the germ theory of disease, the germs themselves were regarded as the maleficent agents and the active causative factors in the production of disease processes. Later on it was contended by many eminent authorities that it was not the germs themselves but the toxic materials or toxins which they generated that caused the trouble, and within still more recent years the theory that the body without the introduction of any external disease-producing germs or toxic materials, can, by a retrograde metamorphosis of its own tissues, produce virulent poisons which may and frequently do lead to serious derangements and even cause death.

It has been clearly demonstrated that intense muscular activity is followed by the formation of organic poisons. This poisoning is, other things being equal, in direct ratio to the intensity of the effort and the amount of muscular tissue involved. Fernand Lagrange, in his work, Physiology of Bodily Exercise, page 348, says: "In the opinion of all physicians in these days the fevers of overwork, which are observed alike in animals and in men, are due to a kind of poisoning of the body by its own elements, to an auto-intoxication of the system by the products of dissimilation which have accumulated in too great abundance in consequence of excessive work."

Michael Foster, the great physiologist, in a lecture before the University of Cambridge, a few years ago spoke as follows: "When we have excessive muscular exertion, the weariness may take a form of distress, and if the effort be continued the distress may become so great as to occasion such complete exhaustion

that even death may result. In excessive work, of whatever kind it may be, in order for the work to be accomplished there is a greater demand upon the blood for oxygen. There are many things beside carbonic acid which are swept into the blood as the result of the activities of the body; in other words, the product of work in the human body is a poison which must needs be eliminated through the medium of the lungs and the other excretory organs. As physical and mental efforts are continued the eliminating capacity, unless carefully guarded, is marred, the resulting poisons are more and more heaped up in the system, poison the muscles, poison the brain, poison the heart, poison at last the blood itself, starting in the intricate machinery of the body new poisons in addition to themselves. The hunted hare run to earth dies not because his heart stands still, its store of energy having given out, but because the poisoned blood poisons his brain, poisons his whole body."

In view of these facts as to the formation of toxic materials by strong muscular activity, I have long been convinced in my own mind that many cases of mild poisoning following parturition in which every possible precaution has been taken to avoid external infection, are caused by the long continued uterine action, which, if intense and tonic, in all probability generates toxic materials much more rapidly than they can be eliminated, especially if this action has been rendered more tonic, intense and continuous by the administration of ergot during labor.

In a paper, "Should Ergot Be Used During Parturition and the Subsequent Involution Period," read before the Colorado State Medical Society in 1894, and published in the Journal of the American Medical Association September 15, 1894, I called attention to this subject, and I now desire to emphasize the position then taken and to insist on the importance of keeping all the excretory functions of the pregnant and parturient woman in first-class working order. Furthermore, my experience has convinced me that a few small doses of calomel, in conjunction with acetate of potassium and sweet spirits of nitre, to each dose of which a couple minims of tincture of aconite root is added, if the latter be indicated, administered every two hours for a day or two, will arouse the excretory organs and poison-destroying powers of the system and do more to relieve the threatening symptoms than all the quinine and coal tar derivatives that can be given to such cases.

In the preface to his translation of Bouchard's work, Dr. Oliver speaks as follows: "Bouchard, in his Auton-Intoxication, clearly indicates to us that man is constantly standing, as it were, on the brink of a precipice; he is continually on the threshold of disease. Every moment of his life he runs the risk of being overpowered by poisons generated within his system. Self-poisoning is only prevented by the activity of his excretory organs, chiefly the kidney, and by the watchfulness of the liver, which acts the part of a sentinel to the materials brought to it by the portal vein from the alimentary canal," and continuing, he says: " The part played by auto-intoxication in mental disease is attracting attention. In the Medical Week, August 11, 1893, there is a lengthy report upon the subject as discussed at the French Congress of Psychological Medicine by Drs. Regis, Chevalier-Lavaure and others. It has long been known that the various fluids of the body undergo modifications in the insane. Recent investigation has shown that the urine is much less toxic than normal in cases of mania, while the lethal action of this fluid is increased in melancholia. Maniacal urine gives rise to excitement and convulsions, when injected into an animal, while the injection of urine from a case of melancholia is followed by a depression of spirits, restlessness and stupor—a proof that auto-intoxication is the cause and not the effect of the mental condition.

I believe that every observing physician could bear witness to the fact that many cases of depression of spirits, mental hebetude and general pessimism are due, not to some incipient serious organic disease, as the patent medicine manufacturer or the blatant advertising charlatan would have the sufferers believe, but are merely the result of the accumulated retrograde toxic products, produced by the normal activities of their bodies, but which, instead of being promptly eliminated, accumulate in the blood and poison the nervous centers, set up disorders of the digestive organs, overtax the liver and lead to almost innumerable functional derangements. I had an excellent illustration of this sort of trouble in the case of a prominent county official that I treated a short time ago. He came to me with a severe, dull, heavy headache and a sense of weight and oppression at the base of the brain; mental hebetude, defective memory; tongue foul and quite heavily coated; bowels constipated and digestion impaired. This condition had existed for a month or two and he had been treated by another physician, who gave him several dif-

ferent prescriptions, but instead of improving he was constantly getting worse. I regarded the case as one of auto-intoxication and gave him small doses of calomel and sodium bicarbonate until the bowels acted freely; and the following prescription, viz.:

℞	Sodii Salicylatis,	24.00
	F. E. Cascarae Sagradae,	12.00
	Aquae,	30.00
	Syrupi Haematici Comp. (P. D. & Co.'s) q. s. ad.	180.

M. Sig: Teaspoonful three times a day.

He almost immediately felt greatly relieved and in a few days the disagreeable symptoms had entirely disappeared.

Bouchard, in his classical work on "Auto-Intoxication," has clearly demonstrated that normal urine—that is, urine taken from healthy persons—when injected into animals produces toxic symptoms, and if sufficient be used causes death. From a careful study of a large number of experiments on animals he arrives at the conclusion that the urine contains substances which produce the following effects, viz.:

First—A diuretic substance, which is urea.

Second—A narcotic or truly toxic substance to which a name has not yet been assigned.

Third—A sialogenous substance, or one which produces salivation or an increased flow of saliva.

Fourth—A convulsive substance, fixed, stable, organic, insoluble in alcohol; it might belong to the group of coloring substances from the manner in which it behaves; it is really an alkaloid, since it is insoluble in alcohol either in the form of a salt or a base. Name not determined.

Fifth—A substance which produces contraction of the pupil; fixed, organic, possibly a coloring substance; probably not an alkaloid.

Sixth—A heat-reducing substance which lowers the temperature by reducing heat production.

Seventh—Another convulsive substance, fixed, inorganic, in short, potassium, whose toxic and convulsive properties have long been known. (Auto-Intoxication, pp. 60-65.)

Time will not permit me to enter into the details of this extremely fascinating subject, but en passant I desire to report a case of auto-intoxication from retention of urine.

On April 22, 1898, I was called to see a case sixty-five miles north of Rawlins and found the following condition: The woman

had been confined with her second child about six days before; the placenta was retained. This was removed and the uterus curetted and washed out by Dr. Calloway of Lander, Wyoming, about three days after the birth of the child.

I found the woman at 8 o'clock p. m. in great distress, pulse about 120, temperature 104 degrees F.; tongue coated and foul; bad taste in mouth; no appetite; bowels somewhat constipated and the whole body was covered by a dark purplish eruption very much like that of measles; face, hands and feet greatly swollen. There was no pain nor tenderness of uterus nor abdominal distension; discharge from uterus about normal in quantity and free from offensive odor. She had not passed any urine for over seventy-two hours, and I drew off seventy-two ounces of highly-colored urine, which afforded great relief. I at once began to administer diuretic and eliminant remedies and the pulse and temperature almost immediately began to fall so that on the following morning they were nearly normal. This treatment resulted in a prompt recovery, but the husband reported to me later on that there was an extensive exfoliation of the epidermis which came away in great scales, some several inches long.

It is gradually beginning to be more clearly understood that not only are diseases directly connected with the digestive and urinary organs caused by auto-intoxication, but likewise disorders of distant and special organs are due to the same cause. In the Journal of the American Medical Association, October 1, 1898, p. 772, is published a paper by Dr. H. B. Young on "Amblyopia from Auto-Intoxication," in which, after eliminating other causative factors, the author very conclusively shows that in all probability they were due to this cause. This paper (read at the Denver meeting of the A. M. A.) elicited an expression of opinion on the part of a number of eminent medical gentlemen, who corroborated the views expressed by the author. Dr. Casey Wood of Chicago spoke as follows: "I have been especially interested in Dr. Young's paper because I believe that I have obtained ample evidence of the auto-intoxication theory of amblyopia. Another matter to consider in connection with this paper is that form of atrophy of the optic nerve that Uthoff placed among the unknown causes. I have for several years held the belief that these cases were in some instances, at least, due to auto-intoxication," and Dr. Dudley S. Reynolds said: "I have every reason to believe that there are many cases of amblyopia due to auto-intoxication. That

view has been forced on me by experience. The inhibitory effect of alcohol on the eliminating organs affords at least reasonable grounds to suspect that a part of the results of amblyopia formerly attributed to alcohol are really due to auto-intoxication, because similar conditions are found in people with disturbed nutrition who do not use alcohol."

Dr. Jonathan Hutchinson (Archives of Surgery, July, 1898), writing about the infective materials generated in the act of inflammation, speaks as follows: "Whilst there can be little doubt that the introduction at the time of the injury of some living germ matter (bacillus) developed in connection with the process of inflammation in the contributor very greatly adds to the risk and gives character to the inflammation induced, there are good reasons for doubting whether any such material is essential. It is highly probable that in some instances a chemical product of decomposition may take its place, and further that in some cases no poison of any kind has been introduced. In the latter group we have to suppose that the tissues of the person wounded are capable of generating as the result of merely mechanical irritation a poison which shall prove infective. We have to accept the proposition—in all probability a truth—that the inflammatory process, however initiated, is always attended by the production of a virus (living or chemical, or both). Inflammation in its early stages always leads to multiplication of modified cell organisms which may be infective; in its later stages it leads to death of cells and may favor the access to the blood of chemical elements, the result of decomposition which may prove very injurious." (Charlotte Medical Journal, September, 1898, p. 320.)

While not relaxing one iota of our care and vigilance to prevent the introduction of external infective materials (indeed, I believe every possible precaution should be taken to prevent such an undesirable contingency), yet at the same time I believe the facts to which I have called attention above should give us a more comprehensive view of the causes of diseases and increase our vigilance in preventing them and enlarge our power of combatting them when existent.

While such a course should not make us less eager in our search for the specific bacilli, bacteria et id omne genus and their toxins, which cause many diseases, it should at the same time enlarge our mental horizon and impress upon our minds the fact

that our whole duty is not comprised in identifying the germ and discovering a germicide to destroy it, but that the afflicted individual should at the same time receive our most serious and earnest consideration. We should strive to secure the elimination of the peccant materials by keeping the excretory organs in good working order and by strengthening the cells and tissues in their fight against their destroyers.

As the individual is the social and economic unit of a nation, and as the strength and resisting power of a nation depends on the health and integrity of its individuals, so the cell is the individual element of the organism and on its strength and unimpaired functional activity depend the health and possibly even the existence of the body.

As money is the circulating medium of a nation, which enables its individuals to exchange their products, satisfy their wants and gratify their aspirations and ambitions, and as the prompt performance of these necessary functions depend on its free and unimpaired circulation among the individuals comprising the nation, so the blood is the great circulating medium of the body and on the proper performance of its functions depend the health, integrity and functional activity of every cell and tissue of which this body is composed.

In a normal, healthy condition a never-ending interchange is going on between the component cells of the body and the blood. If this interchange is free and unimpeded the blood constantly conveys to every cell and tissue the nutrient material necessary for their growth, the preservation of their integrity and their proper functional activity, and receives from these cells their retrograde toxic products and conveys them to the excretory organs, which, if they are in proper working order, promptly discharge them from the body.

When the truth is once thoroughly understood and appreciated that anything which interferes with the functional activity of the excretory organs and prevents the free elimination of poisons not only causes the blood to become loaded with toxic materials and thus renders it less able to take up the retrograde products of cell activity than when it contains a comparatively small amount of these materials, but that the poisoned blood less readily conveys the nutrient material which is absolutely necessary for the life and health of the cells, and that the accumulating poisons inhibit their activity and lessen their power to recognize

and combat maleficent agents, when I say we once fully appreciate the importance of these truths and realize to how great an extent the welfare of the body depends on the consentaneous activity of the cells, the blood and the excretory organs, we will be able to appreciate the importance of auto-intoxication as an active factor in the production of diseases.

SUPPURATIVE DISEASES OF THE ACCESSORY SINUSES OF THE NOSE.

By WM. WINTHROP BETTS, M.D.,
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While a great deal has been written on the subject of suppurative inflammation of accessory sinuses of late, it is a subject that can hardly be said to be exhausted. It is one of great importance, and is equally interesting to the general practitioner and rhinologist. A chronic purulent discharge from the nares, associated with little or no fetor perceptible to the attendant, with a history of nasal polypi, an acute "head cold," hypertrophic nasal catarrh, or perhaps of alveolar abcess at a period more or less remote, has, comparatively speaking, only recently and with the development of the study of rhinology, been of any special significance to the surgeon.

With the evolution of the specialist, however, and classification of diseases of special organs on a more scientific basis, was soon followed by a clearer comprehension of the nature of morbid conditons of which such a discharge is the evidence, and in many instances the only evidence at the command of the physician.

Treatises on general surgery, as found in our libraries, contain very little that is of practical value upon the subject, and even those more recent and exhaustive works upon rhinology which have appeared within the last decade, give comparatively little space to the discussion of the aetiology, pathology and treatment of a morbid condition, the importance, the consequences and the extreme obstinacy of which can only be estimated by

those who, like myself, have often seen their best efforts vainly directed, and that with perfect cognizance of the existing condition.

That empyema of these sinuses is not an infrequent complication I am assured, as well from the number I have myself seen as from the reports of others, and yet I am convinced that it is less often recognized and correctly differentiated than any other disease of the nasal tract.

AETIOLOGY AND PATHOLOGY.

Many are of the opinion that the most frequent cause of this disease is the extension of the inflammatory process from the nose into the cavities. While Bosworth and others dissent from this view, believing that the diseases rarely result from an extension of the inflammation through the continuity of tissue, but is due rather to a catarrhal inflammation of the mucous membrane of the sinuses, brought about by a closure of the nasal opening, Baerhav's researches show that in the normal condition the sinuses contain a bland, inodorous, gelatinous, colorless fluid; that this secretion keeps the walls moist, but does not accumulate in the cavities, it being partially absorbed and possibly partly evaporated by the passing air current, but should causes operate to close the orifice, the external air could not penetrate into it, nor could the air already in the cavity escape from it. In this case the vascular system would act as a medium for gradual absorption of the confined air, which would necessarily be replaced in the sinus by secretion. But as this secretion could not be absorbed as rapidly as exuded, the air yet remaining in the cavity of the sinus would decompose the accumulated mucus, thereby causing irritation and disease of the mucous membrane, and which eventually degenerates into one characterized by a purulent discharge. In this manner hypertrophic rhinitis and polypi producing stenosis of the natural opening, frequently cause a suppurative inflammation.

Zuckerkandl, in his treatise on pathological anatomy of the air passages, says: "My experience with the inflammatory diseases of the lining of the accessory sinuses is that they mostly follow pathological processes of the nasal mucous membrane," while Watson of London (in his work) expresses the opinion that nasal polypi are the most frequent causes of suppuration.

The cavities also become infected and undergo changes in diphtheria, measles and scarlatina. Bacteriological examinations of the accessory cavities were made by Dr. Wolff of Paris in 1896 and twenty-two cases were examined. In all there were disease changes in the antrum of Highmore. In seven cases only slight changes were observed, these being mucous and mucopurulent secretions without inflammatory changes in the mucous membrane itself. In the remaining fifteen cases there were more marked changes, the mucous membrane being in a condition of inflammatory oedema with hemorrhage in places. The diphtheria bacillus was confined to the cases with marked changes, and was absent in three out of fifteen. The sphenoidal sinuses were not developed in fifteen cases. In the other seven cases there were more or less inflammatory changes. In six of these the diphtheria bacillus was present. The frontal sinus in the only case in which it was examined was the seat of severe edematous swelling and contained diphtheria bacilli. Five cases of measles and two cases of scarlet fever were also examined, various bacteria were found, and severe inflammatory changes were found like those in the case of diphtheria.

Influenza is found to be a fruitful cause of suppurative disease; traumatism and syphilis may also be the cause of the trouble.

Text-book authorities seem to be about equally divided as to antrum trouble—on the one hand asserting that disease of the teeth is the most common source of the affection, and on the other believing the majority of cases result from diseases of the nasal cavities. I will quote from a paper read before the A. M. A. in 1896 by Dr. M. D. Fletcher, entitled, "What a Dentist Saw In Examining 500 Crania." "As to diseases of the antrum, it is claimed by the majority of authors that this disease comes more frequently from abcessed upper molars than from any other source. My series of examinations show that out of 252 cases of abcessed upper molars, only 12 perforated the antrum. This would seem a remarkably small number and would indicate that abcessed teeth do not cause antral trouble as often as is generally maintained, and there is good ground for the belief that the teeth may often be affected by disease of the antrum." And later on he states: "It is my belief that if accurate statistics could be had they would indicate that the exciting causes of disease of the antrum is ten to one in favor of intra-nasal diseases."

On the other hand, we find that Dr. William Carr of New York stated before the A. M. A. in 1889 that, "in his belief 80 per cent. of the cases of suppuration of the antrum are caused directly or indirectly by diseased teeth."

In Burnett's system of diseases of the "Ear, Nose and Throat," I find an analysis of thirty-one cases. Thirty-three per cent. were due to dental caries, 10 per cent. to tumors, 22 per cent. to unknown causes, while but 13 per cent. could be attributed to causes arising within the nose. The proportion here attributed to dental diseases seems to me extraordinarily large, likewise the number for which no cause could be found. That it is often impossible to determine which of two existing lesions—dental caries or hypertrophied and degenerated turbinated tissues—is the primary cause of pus secretion in the antrum, I am well aware. However, reviewing what has been written upon aetiology, we find a somewhat startling difference of opinion even among contemporaries with equal opportunities for observation. It would be difficult to account for this discrepancy were it not that most of the writers of ten or fifteen years ago were influenced largely by the purely surgical aspect of the disease. To illustrate, I will quote from Garrotson's System of Oral Surgery. He drew the conclusion that "diseases of the antrum are for the most part simple in character, easy of diagnosis, and as a rule not at all difficult of treatment." And Louis McLean Tiffany, professor of surgery, University of Maryland, says in his article written for the American System of Dentistry: "The diagnosis offers no difficulty and treatment is simple and rapidly effective." This conclusion is very misleading, and I think it will be borne out only by the experience of the oral surgeon, and not by that of the rhinologist. For reasons at once patent, the former as a rule comes in contact with those cases arising from caries of the teeth alone, and that during or subsequent to the acute stage, while the latter has to deal with those arising primarily in the cavity, or from a diseased condition in the nose as well, and as a rule is consulted only after chronicity is well established, the history often indefinite, and merging into that of polypus, or hypertrophic catarrh, and without those perfectly clear aetiological landmarks which present in the former. Now, if this be true of the antrum, the largest and most commonly affected of all the accessory cavities, it applies with much greater force to the conditions affecting the frontal and sphenoidal sinuses and the

ethmoid cells. When these cavities are affected, it is by no means an easy matter to correctly diagnosticate the case, and still less so to successfully treat it.

DIAGNOSIS AND SYMPTOMS.

In spite of the advances that have been made in the study of diseases of the nose and its neighboring sinuses within recent years, we still find abscesses that have existed in these cavities for a long period and have been treated for neuralgia, etc. These facts bring the symptoms and diagnosis to our attention with unusual interest.

The symptoms of empyema of the antrum vary with the intensity of the inflammation and the possible closure of the ostium-maxillare, varying from a mere discharge of pus into the nasal cavity to the most distressing sensations, pain and tenderness. A suppurative inflammation of the nose is an extremely rare affection. It may, however, occur from infection, as, for example, from gonorrheal poison. Aside from the infection above mentioned, there are five possibilities, after eliminating wounds and inflammation following the acute exanthemata, that may give rise to pus in the nasal chamber:

First—Foreign bodies, including nasal polypi.

Second—Diseases of the bone.

Third—Secretion of pus from the antrum of Highmore.

Fourth—From the anterior ethmoid cells.

Fifth—Secretion of pus from the frontal sinus through the infundibulum.

While the secretions from the posterior cells find their way into the pharynx with those from the sphenoidal sinus.

If pus should continue to flow after the removal of the polypi or foreign body, we are then likely to have either an abscess of the maxillary sinus, of the frontal sinus, or of the ethmoid cells. Occasionally it is difficult to differentiate between these, for in each case pus is found in the middle meatus, extending along the inferior border of the middle turbinate body. When this body is sufficiently contracted, which can be accomplished by an application of a 10 per cent. solution of cocaine, the middle meatus will be brought into full view and pus found in the hiatus-semilunaris. If it is not possible to bring about the contraction of this body by cocaine, then the hypertrophied or swollen tissue should be destroyed by means of cautery or chromic acid. The opening of

the frontal sinus will be found in front of the ostium-maxillare in a funnel-shaped depression (the infundibulum). Owing to the close proximity of these two openings, it is very difficult to discover from which the pus flows. Hartmann of Berlin has suggested the following method to ascertain the source of the secretions: "After drying the parts thoroughly with absorbent cotton, he drives a blast of air through the affected nostril by means of a Politzer air bag." By this procedure he claims to be able to aspirate the pus from the sinus and thus discover its source.

Another point in the differential diagnosis is that abscess of the maxillary sinus is of comparatively frequent occurrence, while that of the frontal sinus is comparatively rare. The most positive means of differentiating between these two affections is by making an exploratory puncture under the inferior turbinated body about its middle. There is very little pain following the operation and it is devoid of danger. The puncture should be made in all doubtful cases, and its use will, I think, tend to prove that this affection is much more common than is generally supposed.

In continuing, I will limit my remarks as much as possible to the frontal and ethmoidal sinuses. It is very important that these cases should be recognized and treated early, for upon their early recognition depends the final issue, which in many cases has resulted in death of the patient. In well-marked cases the diagnosis of abscesses of the ethmoid cells is not a difficult matter, but in many instances the symptoms are obscure, and there is frequently an implication of one or more of the neighboring cavities, so that it is almost impossible at times to tell which is the source of the pus. Then we can arrive at a diagnosis only by exclusion.

Among the earlier symptoms of abscess of the ethmoid cells may be mentioned pain, neuralgic in character, referable to the bridge of the nose, increasing in intensity with the progress of the disease, and extending outwardly along the inferior orbital ridge, and occasionally along the superior orbital ridge. With a distension of the cells there is a sense of pain, pressure felt in the orbit, and a narrowing of the field of vision. On rhinoscopic examination, if the abscess is of the open variety, pus will always be found in the middle meatus, and if the posterior cells are involved it will occasionally be found passing into the post-nasal space. The middle turbinated may or may not be enlarged.

This depends on whether it communicates directly with the ethmoid cells. Occasionally an abscess may exist in the frontal sinus without giving rise to any symptoms except a slight discharge of pus from the nose, but in the majority of cases the symptoms are very pronounced and vary in intensity according to whether the fronto-nasal duct is open or closed. Pain in the frontal region at first is dull and then becomes lancinating in character as the secretions distend the cavities. This is the most common symptom. There is pain on pressure over and under the supra-orbital ridge, and there may also be some redness and swelling of the skin over the affected sinus, which sometimes involves the eyelid. If the fronto-nasal duct is open there will be a discharge of pus from that side of the nose, and upon rhinoscopic examination pus will be found in the middle meatus just under the anterior extremity of the middle turbinated body. This is the variety of the disease most frequently met with. If, however, the duct should be closed, then there is a dilatation of the sinus, with a tendency to bulge at its thinnest part at the inner angle of the orbit, on a level with the root of the nose. If there is no relief, the pus finds its way through the swelling into the orbit or ruptures posteriorly into the cranial cavity. Occasionally abscess of the frontal sinus is complicated with abscess in the ethmoidal and maxillary sinuses. As these cells are in close proximity to the frontal, in all cases of obstinate or prolonged suppuration in this cavity they are involved in the suppurative process.

The method which promised much for differential diagnosis was brought out some years ago. By many it is considered the most valuable agent of diagnosis we possess, while others condemn it and a few speak of it as an elegant plaything. I refer to transillumination. My personal experience with it, however, is limited and unsatisfactory, possibly due to faulty methods of examination, and I hope some one here can come forward with a more favorable opinion.

In passing I refer you to papers of Dr. Codwell (New York Medical Journal, Vol. 58, p. 528) and Frank S. Malbury (New York Medical Journal, Vol. 64, p. 519). These very excellent papers give very full notes on technique and reports of cases.

After reviewing the observations of many rhinologists the results are disappointing. While transillumination has its field as a diagnostic method, it should not be depended upon to the

exclusion of other valuable means. Taking all the results into consideration, it may be said that transillumination is of value in some cases to corroborate an already established diagnosis, but that it cannot be regarded as a reliable method, particularly if the other well-known symptoms are absent. I think it might be of more value in watching the progress of cases under treatment than as a method of diagnosis.

I have dwelt thus at length upon the aetiology and diagnosis as the importance of early recognizing the exciting causes of the disease in question cannot be overestimated by one who expects success to attend his efforts toward a cure. When but one sinus or one side is affected and in typical cases seen early, diagnosis is not difficult, but typical cases are not the rule, and it is seldom that the advice of a physician is sought before chronicity has complicated the primary lesion with its confusing sequelae, and then it is that diagnosis will often of necessity sink to the level of a mere conjecture. Of the treatment of these affections I can say very little that is not better told, and as I have already trespassed upon the time of the society, I will refer you to the published reports of cases and the text-books for the detailed methods of procedure. However, in order to bring the subject of treatment before the society for any who care to discuss it, and yet remain under the dominion of this paper, I will state as briefly as possible some deductions made from personal experience and quite an extensive review of the literature on the subject.

First—Not all cases need surgical interference, and many acute cases get well spontaneously, others by treating the hypertrophy of acute coryza.

Second—That we must be guided in the choice of operation by the probable cause of the trouble and its chronicity.

In empyema of the antrum, when due to inter-nasal obstruction or inflammation, remove the obstruction and reduce the inflammation; if the discharge is inodorous and no other symptoms, wash out through the normal opening or puncture in the inferior meatus. If there should be other grave symptoms, such as those due to pressure and death of tissues of the antrum, not due to dental caries, the choice of operation would be through the canine fossa, and I would only sacrifice a tooth when there is every reason to believe the trouble due to dental caries. As a cause for opera-

tive interference dental caries can be excluded from the other cavities.

One of two methods can be chosen for operating on frontal sinuses: Inter-nasal, and by perforating just above the superorbital ridge. The sinus may be freely opened by enlarging the infundibulum through the nose with a curette, and the sinus irrigated and medicated by means of a soft silver catheter.

The older operation of cutting through the frontal bone is necessary in all cases of extreme exfoliation or necrosis. When the ethmoid cells are affected it is advisable to break through them and curette.

In order not to confuse symptoms and indications for treatment, I have avoided speaking of the sphenoid sinus except in a general way. The posterior ethmoidal and sphenoidal cells, however, form what may be called a posterior group. Their openings are above the middle turbinated body and can be studied only in the rhinoscopic mirror. The posterior ethmoid cells are drained by several openings above and below the superior turbinated bone. Therefore pus found in this region or seen in the posterior examination above the middle turbinated body must have escaped from the posterior ethmoid cells. The sphenoidal opening is in the extreme upper portion of the posterior wall opposite the superior turbinated body, and the usual course of the secretion from it is downwards along the posterior wall close to the septum. The subjective symptoms of empyema of the cells is similar to the other cavities except the headache is referred to the back of the head, and there are more marked ocular symptoms.

I was very much interested in a discussion precipitated by Dr. Bosworth last year before the A. L. A. relative to the frequency of sphenoidal disease. Dr. Bosworth says: "My own records show reports of 150 cases of ethmoid disease, which as a rule yielded more or less satisfactorily to treatment, but in all my experience I have seen but two cases of sphenoidal disease and both terminated fatally." Leading specialists of the country give evidence in their discussions of similar experience. These statements would indicate it to be a rare disease, still more rare as a primary disease and more frequently observed as a complication of abscess of the ethmoid cells.

The operation for relief of the sphenoid trouble is exceedingly difficult even in the hands of experts, the choice of operating being the anterior-nasal and the posterior. The body of the

sphenoid can be reached from either angle. The treatment of diseases of the accessory sinuses will occasionally be found very tedious and discouraging, but if care has been taken to establish free drainage and the antiseptic applications thoroughly applied, the majority of patients will recover.

CEREBRO-SPINAL-MENINGITIS.

By JOHN F. LEEPER, M.D.,
Casper, Wyoming.

In the year 1805 Vieussens described, under the designation of a "malignant, non-contagious fever," a disease which of late years has become one of the most dreaded maladies which the physician is called upon to treat. Previous to that date we have no record of it in the writings of any authority, but since that time we find it treated of at length in the works of all writers on general medicines.

Cerebro-spinal meningitis might be defined as a malignant, non-contagious, inflammatory disease, probably due to microbic infection, and manifested by the occurrence of acute inflammation of the meninges of the brain and spinal cord. That the disease is primarily a constitutional disease, and that the meningitis is but the local manifestation of systemic infection, is abundantly proven by clinical research. Although the disease sometimes occurs as a complication of other diseases, it is usually primary and the patient is stricken down abruptly, without any premonitory symptoms, and is in a dangerous condition from the first, and in a large percentage of cases the disease ends fatally, from the intense hyperaemia of the nervous centers, or from the severity of the cerebro-spinal meningitis.

It is now generally believed that the disease is of microbic origin. The microbe is of an oval shape and occurs mostly in pairs. It resembles the pneumococcus of Friedlander so closely that the best microscopists are of the opinion that they are identical.

Cases have been related by competent observers that seem to show that in some instances the cause of cerebro-spinal meningitis and pneumonia might be identical. The epidemic which

I observed occurred in just such weather as would be favorable to the development of pneumonia, but during the whole continuance of the epidemic there were no cases of pneumonia that came under by observance. The rapidity with which the exudation is poured out around the brain in cerebro-spinal meningitis, taken in connection with other symptoms, have led me to wonder if the disease were not a metastasis of the specific cause of pneumonia, which, under certain favorable conditons, took up its seat of action in the meninges, instead of the lungs. This point requires further study, and is a favorable field for original investigation. That cerebro-spinal meningitis is not contagious is, I think, settled beyond question. That it is dependent upon some local anti-hygienic condition is also highly probable. In one instance I had three children, all there were in the family, sick at one time. They lived on the third floor of a flat, and on the floor below were three other children, of similar ages, who came and went about the sick room as often as they wished. Two out of the three cases died, while not one of the children living on the second floor contracted the disease. The surroundings of the two families were practically identical, so far as outward appearrances would indicate. Why one family should be attacked and the other escape is hard to understand.

The lower animals are often affected with the disease. In 1890 there was an epidemic of cerebro-spinal meningitis among the horses in the vicinity of Casper, in which whole herds were exterminated. In one instance the effect of locality was very clearly illustrated. The horses had been dying at the rate of three or four a day, when the owner determined to change the range. They were moved to a new range, only a few miles away, and from that time on only two animals were lost out of the herd.

In the epidemic of last spring I advised all who could to leave town, and although some of the families only moved a few miles into the country, not one case occurred among those who left. This proved to me that the incubative period is very short, and that the cause or causes of the disease are limited in area. In no instance has the disease been transported from one city or locality to another, so far as I am aware.

In May and June of the present year I attended eighteen cases, six of which were fatal. Of the six fatal cases one died in thirty-six hours and all died in less than five days after being attacked. The first case was that of a little girl aged 6 years,

who was taken with vomiting about 11 o'clock at night, which, after an hour or two, subsided, and she slept well until morning. I was sent for next day about noon and found the child about the house, feeling fairly well. I did not examine her very closely, but concluded, from the history of the case, that she had had indigestion and that all she needed was simple treatment, and so I informed the parents. I prescribed a mixture of pepsin and bismuth, and when I heard from her that evening she seemed as well as ever. She played in the yard after supper and went to bed at the usual hour and slept well until about midnight, when she waked up crying with the headache. She vomited, and when the parents found that the medicine that I had been giving did not relieve her I was sent for and found her in a semi-conscious state, with widely-dilated pupils, with the head retracted and the arms flexed strongly at the elbow. Upon trying to straighten the arms it seemed to cause suffering, and the slightest touch about the chest or abdomen seemed to cause intense pain. After a careful examination I pronounced the case cerebro-spinal meningitis, and told the parents she would probably die. Nothing that I could do seemed to benefit her in the slightest degree, and she died next day at 2 o'clock p. m. The surface was covered with petechial spots, which, several hours before death, became purple and sometimes black. Death was apparently due to failure of respiration, the breathing becoming irregular and finally stopping altogether, while the pulse continued to beat after the breathing had entirely ceased. I relate to you this case only to call attention to the fact that the disease is characterized by remissions, when all the symptoms are improved, and the physician and family are liable to believe that the danger is past, when in a few hours, or even minutes, the symptoms return with increased severity, and, if the physician has given a favorable prognosis, he is now placed in a very unenviable position.

The symptoms vary in different cases, but in all the cases treated by me in this epidemic the onset was sudden and usually attended by vomiting. Most of the cases developed in the afternoon or early part of the night. I did not see a case where the sickness began in the early morning. Among the earliest symptoms are those relating to the pupil of the eye. In most cases the pupil is found dilated and it does not react readily to light. In some of the cases observed by me there was irregular contraction. In one case one of the pupils was crescent-shaped. In some cases

there is marked strabismus, which is usually convergent. The skin presents appearances which, taken in connection with other symptoms, is highly characteristic. In even the mildest cases there will be found certain eruptions. In some of the mildest cases small, symmetrical, rose-colored spots will be found scattered on the surface, which are most pronounced on the soles of the feet and palms of the hands among children. In the most serious cases the eruption may be in the form of petechiae, or may be as large as a dollar. The eruption seems to be a hemorrhage into the skin. I did not observe any hemorrhages from mucous surfaces in any of my patients.

In regard to the treatment, I found that in some cases cold applications to the head and spine were well borne and seemed to do good, but in a great many cases they produced too much disturbance and required force in some cases to keep them on at all. After trying both my preference is for heat instead of cold. My plan was to shave the head and make a poultice of flaxseed meal, made somewhat irritating with mustard, in the shape of a cap, to completely envelope the head, and another along the spine. These were changed every few minutes, applied as hot as they could be borne. This I kept up night and day until the symptoms began to abate. Internally I am opposed to the use of morphine or opium. I tried both faithfully but was disappointed in their use, and finally discarded them altogether except as an adjunct to other medicines. I used bromide of potassium for the restlessness and headache and gave the veratrum-viride in frequent and full doses. In using veratrum-viride I preceded the dose with a small dose of deodorized tincture of opium to prevent the nausea produced by the veratrum. Two cases treated in this way recovered when the symptoms seemed as bad as any of those that I lost on other treatment. In the declining stage of an epidemic there are a great many abortive cases in which the symptoms start in severe but cease as suddenly as they began, and recovery takes place in a short time.

In still other cases the disease is prolonged for several weeks, while the symptoms are at no time severe, recovery taking place with simple treatment.

I would like to go fully in detail in regard to this important disease but have not got the time, and so will close, asking the society to excuse this poor effort at handling a very important subject and promising to do better at the next meeting, when I hope to be present myself and renew old acquaintances and make new ones.

HOW DOES THE CAUSE OF DISEASE PRODUCE DISEASE—A FURTHER STUDY.

By G. M. RUSSELL, M.D.,
Dixon, Wyoming.

In the Journal of the American Medical Association of July 2, 1898, appeared an article entitled, "How Does the Cause of Disease Produce Disease? A New Interpretation of Operative Principles," by Dr. W. R. Dunham of Keene, New Hampshire.

The subject matter of this article appeared to me to be worthy of some study and consideration and to be of such a nature as might prove of interest, at least to some of the members of this society.

Dr. Dunham holds that vital force is the only active force responsible in the manner of causing disease. He quotes from a distinguished editor of an American medical journal as follows: "There is no drug yet discovered, unless it be alcohol, which adds to the forces of the body." He then goes on to say: "But even this only source will be discredited when it is recognized that medico-biologic science is based entirely on the functions and operative principles of the vital force energies; therefore in place of teaching medico-biologic science as being based on functions and operative principles, derived from both within and without, this division of natural science will have its recognized first principles beginning with the comprehension of the nature of the vital force agency."

He also quotes from Henry Maudsley. "It is easy to perceive how impossible it is in the present state of science to come to any positive conclusion in regard to the nature of vital force. This generation and generations to come will have passed to their everlasting rest before a discovery of the secret of vital activity is made." Commenting on this he says: "Notwithstanding such statement the vital force problem, as implied in the operative plan of its several ultimate principles, is already solved, and is no more difficult to comprehend than the Copernican plan of astronomical science and may be as positively demonstrated."

He lays great stress upon his definitions for sensibility, instinct, sensation and contractility and says a proper understanding of them is necessary in order to comprehend his theory.

His entire theory is based on sensation and its transmission, in that pathologic processes are set up by irritation reflexly; that the conditions called health and disease are each presented or executed as involuntary acts in response to existing sensation, normal or abnormal. That medicine is useful, not because of an associated active principle, but as the means from a relation of contact for the development of special sensations—the idea that medicine acts is misleading; there is no medical power, but medicine causes special sensations in response to which involuntary life acts are exercised; that the cause of disease does not attack the organism; that the food or soil favorable for development of bacteria in the human system is made to exist largely from pathologic vital action, and thus in the virus produced by non-recurrent contagious diseases micro-organisms will multiply into millions and perish when the food supply or materies morbi is no longer liberated—in such instances the presence of the microbe becomes a consequence rather than a cause of the disease; that the "special virus" is a product from pathological vital action and not a poison excreted or secreted by the microbe—the microbe does not come in and attack the human organism, but simply multiplies and consumes the virus as scavengers—that it is the virus and not the microbe that becomes the cause of the disease; that the microbe is not sufficiently complex to perform the function of excretion or secretion of poison and does multiply and perish rapidly; that it is only the micro-organisms which have been developed from some virus cause of disease that cause pathological disturbances to be manifested.

It would seem to me that in endeavoring to reason out the method in which the cause of disease produces disease, Dr. Dunham made his cause of disease to conform to his new theory, instead of modeling his theory to conform to the accepted cause. At any rate, he has lost sight of the real cause itself, and there is danger of leaving us just where we were before the microbe and its relations to disease were discovered. The only demonstrable causes of certain diseases are the micro-organisms, and as we all know, the bacterium of each disease has its own peculiar characteristics, and it is always found in the disease which it produces if looked for by a competent and careful observer. The same disease is caused by the same microbe when introduced into a healthy organism, and yet in the face of the evidence that the absolute causes of these diseases are microbic in character, this

new theory is advanced, refuting and branding as false the positive knowledge which the results of many years of labor and investigation have made one of the pillars upon which the science of modern medicine rests; assuming that the microbe is generated de novo and adopting instead a vague, indefinite "special virus" liberated by vital force, the initial cause of which is irritation—and by what? He does not state what the irritation may be which in the first place causes an impulse to pass in through the sensorium and cause reflexly the liberation of virus, nor does he enlighten us as to the material from which the special virus is produced, nor yet again from what the microbe may result. The microbe again is but a scavenger to consume the virus. Then why would it not be better to introduce them and aid and succor their growth in order that the virus may be the more quickly devoured? Why are the modern surgical methods so successful in dealing with diseased conditions? Can it be possible that the antiseptics in use, so destructive to the bacterium, are in every case coindidently destructive to the special virus? Then as to the differential cause he makes no provision, whether there is a different kind of irritation necessary to produce diphtheria from that which is required for typhoid fever or measles, or whether it is necessary that the irritation should be produced upon a certain set of nerves for its differential effect.

He says we should observe a distinction between primary and secondary causes. The former may occasion a disturbance which in itself later develops a great variety of secondary causes for the continuance of disease. According to this, why should we not have a cycle of all diseases, each new batch of virus serving as an irritation for a succeeding lot? Then as to the army of disease microbes, which he says is not hovering in the air awaiting an opportunity to attack exposed tissue, we are all aware that the great mass of microbes in the air are non-pathogenic.

The only way in which he explains the method of causing disease is through a reflex; but that is not sufficient; it does not take us to the last step in the process. To what particular cells and what particular organ or organs does the reflex go? Of what nature is this special virus, how is it elaborated and from what? What causes the original irritation? If virus which has been introduced, what shape is it in and how has it gained entrance? In fact, what are the successive steps from the introduction of the cause of the original irritation to the elaboration of

the virus? After elaboration of the virus what becomes of it if it is not consumed by the microbes?

Vital force is like the mind, an unknown quantity. It is, as an eminent alienist has pictured the mind, "but an organist," and when the organ is out of tune or out of repair the result is a discordant jumble. And so with the organs over which vital force presides. When the cells of the organs have departed from a state of health or from a state of "harmony with their environments," as one author puts it, vital force can do nothing but what the organist would do—strike the proper keys. We are no nearer the solution of the vital force problem than we were at the time Maudsley wrote the words above quoted, and I see no more reason for accusing vital force of that of which it may be innocent than I do for ascribing to "reflex" all the ills of humanity for which we can discern no other cause. Judging by analogy, however, I cannot believe that vital force changes its character any more than any of the other forces of nature, nor, by the same process of reasoning, do I see why it should be governed and controlled by irritation. The results of the actions of the other forces of nature vary with the nature, conditon and properties of the objects upon which they act, and why should vital force be an exception in this?

Every cell of our body is bathed in lymph, which is the food vehicle, and in this fluid are all the substances which are absorbed and to be assimilated. In it there may be toxic elements or principles, or the elaborators the microbes themselves, or whateven may be the pathogenesis. The cells then are out of harmony with their environments, bio-chemical changes take place which alter the shape and composition of the cell and perhaps results in its death. The cell being so altered, the result of the action of vital force is likewise altered and modified or lost entirely.

The solution of this problem cannot be definitely made until we can compare the bio-chemical composition of the live, healthy cell with that of the diseased cell. Just as the key of an organ may be out of tune by any number of different degrees, so may the bio-chemical composition of the live but diseased cell differ in a variety of forms.

We can follow our toxic producers or their products through the digestive or respiratory tracts into the blood. We can follow them into the lymph and can find them in the cells themselves, but their positive and ultimate action with respect to

the changes and alterations in the bio-chemism of the cells is yet to be discovered. It is at this point where vital force and materialism meet. Here is the missing link in the mode of cause of disease. What particular modifications are necessary, and in what infinitesimal degrees these modifications must differ to produce the various phenomena we call disease, remains for further scientific investigation. Certain it is that these modifications differ according to the pathogenic cause. It would appear to me that the toxic substance coming in contact with the cell changes its bio-chemical composition just as a chemical reagent changes that of a salt; that the strength and nature of the reagent (virulence and kind of the toxine) is the measure of the amount of variation from the normal composition, and this variation gives us our different forms of disease of our various organs and their degrees of severity.

Medicines, then, act in the same manner in which the toxic elements do, i. e., by altering the bio-chemical composition of the diseased cell, neutralizing the action of the toxins and bringing the bio-chemical formulae back to the original normal. As the bio-chemical composition of the cell varies from the normal, so does the result of the action of vital force upon it vary from the normal.

It is not within the province of this paper to argue for or against the germ theory of disease. The consensus of opinion of scientists is that microbes are the cause of most disease, which opinion is based on facts which have been proven and reproven by years of thorough investigation by competent men. Why should we abandon these facts and resort to theory and speculation of which we have too much already? Time would be much better spent in investigating the changes which undoubtedly take place within the cell protoplasm when brought in contact with the toxins.

Practical, material research is the need of the hour.

HICCOUGH: REPORT OF A CASE.

By W. A. JOLLEY, M.D.,
Rawlins, Wyoming.

We are all so familiar with the "hic" of the drunkard that the following history of a case of hiccough may be of interest to you for a contrast:

Mrs. L., age 26, Cuban, married, borne children and had miscarriages, has had pain in right chest for several years and at intervals spits blood.

August 12th began to spit blood and complained of severe pain in right chest. The next morning began to hiccough six to ten times in rapid succession; stop for two minutes, then start again. The intervals of rest were never over five minutes unless the patient was completely under the influence of bromides and morphine, which the attending physician prescribed.

I first saw her August 16th, 10 a. m., after she had been hiccoughing for three days. She was nearly exhausted as she had taken no food; pulse 120; was sore all over.

Prescribed antipyrine 7½ grains every 3 hours; ammonium chlorid 15 grains in mist. glyc. comp. ʒi every three hours. Ice bags were placed over pain in right chest and over stomach, but no relief was obtained. Mustard plasters were then applied but gave no relief.

10 p. m.—Condition not improved. Gave her morph. sulph. 1-16 gr., atropine sulph. 1-300 gr., strych. sulph. 1-30 gr., and inhalation of 10 grains of menthol dissolved in 2 drams of chloroform during paroxysms. Intervals of rest lengthened and she was able to sleep from 12 p. m. to 6 a. m., when the hiccoughs started as bad as at first. Gave 2 comp. cathartic pills, inhalations of menthol in chloroform, and antipyrine 7½ grains every one and a half hours. Intervals gradually lengthened and at 10 p. m. went to sleep and slept until 5 a. m. She had an occasional paroxysm for several days.

As to the cause, I am unable to determine.

She has some uterine and ovarian disorder in addition to the chest trouble, but I was unable to determine the exact lesion of either. She also had a gastritis at the time. Whether it was due to the medicine I do not know.

Among the remedies which I saw recommended were the following: Holding the breath as long as possible, rapid breathing, lavage of stomach, rhythmical traction of tongue, pressure upon phrenic nerve, using snuff and nearly every drug in the U. S. P.

December 5th patient sent for me, said that she had taken cold and was afraid she would have another attack of hiccoughs. Prescribed an expectorant, but they started at 3 p. m. Antipyrine was administered after an active cathartic. Paroxyms stopped at 1 a. m.

THE PROPHYLAXIS OF PUERPERAL INFECTION.

By C. H. SOLIER, M.D.,

Superintendent of the Wyoming State Hospital for the Insane,

Evanston, Wyoming.

The subject I have chosen for consideration to-day would seem to be worn quite threadbare from its having been so often used as a theme for discussion. Yet the urgent necessity of a more strict adherence to the principles of aseptic and antiseptic surgery in obstetrical practice is so apparent that I trust the few moments given to its consideration will not prove profitless.

Probably when mankind was in its primitive state, not yet perverted and enervated by the environments, habits, restraints and diseases of modern life, the process of parturition was largely a physiological one, and practically devoid of danger. Our civilization unfortunately, however, has so modified these conditions that this process may well be regarded as a complicated pathological one, and one demanding on the part of the obstetrician the exercise of a high degree of caution, discretion and practical knowledge. In fact it is probably true that the practice of obstetrics entails upon the physician a greater degree of responsibility than that assumed in any class of cases excepting, of course, surgical ones. Death from any cause is instinctively dreaded, but the death of a mother, either at the very threshold of active life or later, when entrusted with the care of a growing family, is indeed an awful calamity. And woe to him who by any act of ignorance or carelessness, shall convert this occasion of hopeful rejoicing to one of disconsolate mourning and despair.

Probably in no branch of medical or surgical practice is there a more convincing demonstration of the fact that ours is a progressive art than in the remarkable reduction in recent years of the mortality attending the puerperal period. In hospitals and maternities where careful statistics have been kept, the results are indeed surprising. The present mortality in many of these institutions is almost nothing. This is the more remarkable when we consider the fact that their patients are largely composed of the homeless class, some of whom were taken in labor before admission, and many of them in a deplorable condition as the result of protracted labors or severe operative measures which had been unsuccessfully attempted elsewhere. For example: Dr. Goodell has stated that at the Preston Retreat, in 756 cases of labor, there had been but two deaths from sepsis. Dr. Palmer of Cincinnati recently stated that twenty-five years ago the mortality in puerperal cases at the Cincinnati Hospital was 10 per cent. Now it is almost nothing, there having been no deaths in the past three years. It is unnecessary to multiply instances of the favorable results attained in numerous maternities, both in the United States and in Europe. Suffice it to say that the achievements of aseptic and antiseptic midwifery, as practiced in these institutions, rank with those of modern surgery.

It is well known that the results in private practice are far from being so satisfactory. It is true that the murderous epidemics of a generation ago are now happily unknown. But the mortality is still large and casts a certain degree of odium upon the general practitioner. It is really too much to expect as favorable results in private practice, for there are many obvious disadvantages encountered that are detrimental to the aseptic conduct of labor. Many of these unfavorable conditions are inherent to private practice and are unavoidable. Such are unsanitary surroundings, incompetent and untrustworthy nurses and at times the extreme difficulty if not impossibility of successfully carrying out the details of asepsis and antisepsis. But in spite of all these considerations there are too many deaths in private practice from puerperal infection. What is the reason? Simply because so many men fail to appreciate the essentially surgical nature of an obstetrical case. Consequently they omit altogether the details necessary to secure surgical cleanliness or they attend to them in such a slovenly or perfunctory manner that it vitiates

the whole procedure. It is a well understood fact that measures to secure cleanliness are not equally and uniformly necessary as in surgery. As one writer has it, "It is perhaps possible for a physician to deliver in succession a hundred women in utter disregard of aseptic measures and still have no fatal results." I have sometimes thought that the successful obstetrician was a good example of the law of the survival of the fittest. It is only the man well endowed with tact, perseverance and determination who can successfully withstand the determined opposition, through ignorance or false modesty, that is so frequently encountered in one's efforts to secure all the conditions necessary to the aseptic management of labor. When once this opposition has been yielded to, it is quite easy to acquire loose and careless methods until finally some fatal case of sepsis suddenly arouses the negligent physician to the necessity of a radical reformation of his methods.

In private practice the physician is exposed to so many and to such varied sources of infection that any rational system of proyhylaxis must begin with the physician himself. In this connection Dr. William D. Porter of Cincinnati states in a recent number of the Medical Fortnightly that "The most urgent requirement is that the physician approach each case with clean hands, and all intelligent physicians try to do this. The difficulty of cleansing the hands would be considerably diminished if we were more careful in avoiding the sources of contamination. For instance, in opening an abscess it is not necessary to bathe the hands in pus. By the free use of absorbent cotton or gauze it is possible to avoid soiling the fingers in the least. Moreover, after such soiling the time to disinfect the hands is immediately. In this way the physician would escape the infection of his clothing, and the infectious material would not have time to get fixed in the epithelial crypts of the skin." He advises that similar precaution regarding hands and clothing should be observed when attending contagious diseases. The avoidance of contamination and prompt disinfection after exposure should become the instinctive practice of every physician. Indeed, the cleansing of the hands is the most important of our prophylactic preparations. A nail brush and a cake of aseptic or preferably an antiseptic or germicidal soap should be a part of every obstetrical outfit. When the hands and the nails have been thoroughly scrubbed, they should be bathed for a few moments in a one to 2,000 bichloride

solution before any vaginal examination. Such a solution is more easily kept warm in a quart pitcher and should always be placed where it can be readily reached.

The preparation of the patient and the bed is a matter about which the physician is rarely consulted, and one in which he is often required to exercise his authority. The patient must be impressed with the importance of cleanliness about her person, clothing and bed. The latter is often littered with unclean cloths with which the hands can scarcely escape coming in contact at some stage of the labor. It should therefore be a routine practice to see that not only the patient's clothing, but everything about her is clean. While a complete bath will usually be impracticable, it is always possible, except in emergencies, to have the genitals, thighs and anal region thoroughly cleansed. The hands also of the mother should not be overlooked. Serious cases of sepsis have been traced to the manipulation of the genitals by the patient during labor.

The subject of ante-partum vaginal douches seems at present to be one of the most debated questions in obsterics. It is a well-proven fact that the external genitals provide favorable conditions for the development of pathogenic bacteria and authorities are practically agreed that these parts, as well as everything that comes in contact with them, should be rendered as clean as possible, but as to the existence of pathogenic germs in the vagina, there seems to be a marked difference of opinion. Dr. Williams of Baltimore, after an examination of more than 100 cases, and after considering the findings of other investigators, states that the reason that some of the investigators had reported pathogenic organisms in the vagina, was because they had made use of a large speculum, which had carried in with it some of these organisms from the external genitals. By taking the necessary precautions to guard against this source of contamination he arrived at the following conclusions: First, as the vagina does not contain pathogenic germs, self-infection with such germs is impossible; second, if the vagina really did contain streptococci, frequently a vaginal examination would be very dangerous, which it is not; third, the vagina may occasionally contain bacteria capable of giving rise to mild sapremia; and fourth, death from puerperal sepsis is due to infection from without.

On the other hand, the bacteriologists generally believe that the vagina is the habitat of certain pathogenic germs, though its

acid secretion has an inhibitory influence on these organisms. But it is also contended that during the progress of labor large quantities of alkaline secretion is poured out of the uterus which neutralizes the vaginal secretion, and thus for the time prevents this inhibitory influence on these germs. It is further claimed by the advocates of antepartum irrigations that during vaginal examinations there is danger of carrying into the uterine cavity those germs which are normal to the vagina. Certainly when there is evidence or well founded suspicion that the vaginal secretion is abnormal, as for example, gonorrhoeal, there is no question whatever but that frequent irrigations of strong antiseptic solutions should be employed. In the absence of such indications the opponents of antepartum douches claim that sterilization of the vagina by scrubbing with soap and by the use of strong antiseptic injections is meddlesome widwifery. They insist that these strong injections destroy the normal lubricating fluids of the vaginal mucous membrane, which materially conduces to the easy birth of the child. The consensus of opinion of our leading authorities seems to be that the antepartum injection should be limited to those cases in which the character of the vaginal secretion clearly indicates it, and to cases where operative or instrumental interference becomes necessary.

The advisability of digital examinations for the diagnosis of the presentation, or to ascertain the progress of labor, has lately become the subject of discussion. A recent contributor to the Medical Record argues that such examinations are not only unnecessary, but dangerous; unnecessary because the presentation and progress can be readily determined by abdominal palpation and by careful observation of the character of the pains, the exclamations and general behavior of the patient; and dangerous because of the alleged impossibility of rendering the hand perfectly aseptic. It does not seem probable that any respectable number of physicians will accept such apparently extreme views. They are undoubtedly a natural reaction against the old practice of making too frequent and too extensive vaginal examinations. It may be that an obstetrician of extended experience and of exceptional ability might successfully pursue this proposed method, especially if he insists and has the opportunity of examining his patient before the beginning of labor. But it seems much more certain that, for obvious reasons, the physician possessed of more limited experience and ability will sooner or later regret the

adoption of this method. After a careful examination, made under aseptic and antiseptic precautions, there is no need of its repetition except at rare intervals. Nor is it necessary to insert the examining finger into the uterus unless there are clear indications for such a step. As to the impossibility of sterilizing the hands, the results of aseptic surgery would seem to positively prove the contrary.

One of the essential conditions of sepsis is trauma. Indeed, without trauma it is impossible for septic infection to occur. While there is always present a denuded endometrium, the extent of the contusions and lacerations of the cervix, vagina and perineum will be largely determined by our management of the second stage of labor. If this has been faulty and these wounds are extensive, there is at once presented a condition favorable to the entrance and development of septic germs. The use of chloroform to control violently expulsive pains, the support of the perineum and the cautious yet timely use of the forceps are measures familiar to you all, yet they cannot be overlooked in the consideration of the etiological factors and consequently the prophylaxis of septic infection. Within the past year I have seen in consultation two cases of septicemia, one of which proved fatal, where I am satisfied that the infection occurred primarily from extensive perineal lacerations. The prompt repair of such lacerations will tend to limit the area of lacerated tissue, and to that extent lessen the susceptibility to infection.

In the postpartum treatment of every case there should be frequent cleansing of the vulva and the adjacent parts, preferably with an antiseptic solution, after which there should always be applied a well-fitting antiseptic pad. The use of antiseptic postpartum irrigations after uncomplicated natural labors, is an other unsettled question that is much debated. In this practice as in surgery, our course should be governed by the indications. In the cases just mentioned there does not seem to be any necessity for such irrigations, as the frequent cleansing of the vulva and the antiseptic pads would seem to meet all the indications. But when, as frequently happens, after the third or fourth day the lochia becomes fetid, douches are clearly indicated. It is well to remember in this connection that while the patient is in the recumbent position the upper border of the cervix is below the level of the posterior commissure, thereby producing more or less vaginal retention of the lochia. Not only in the event of fetid

discharges, but also where there have been much bruising and laceration of the cervix, vagina or perineum, I have never hesitated to make use of daily irrigations of hot antiseptic solutions. Sometimes I have used sterilized water, occasionally one to 3,000 bichloride solution, but more frequently a 1 per cent. solution of lysol. I believe there is no question whatever but that, in the hands of a nurse of average intelligence, such injections are valuable in many ways, not the least of which is the stimulation of healthy granulations and consequent avoidance of septic absorption.

It is universally conceded to be a legitimate if not an imperative practice to employ intra-uterine irrigations after every case of manual or instrumental delivery. While it is probable that if such operations have been performed under aseptic and antiseptic precautions, the irrigations might be dispensed with, yet the possibility of infection seems to be a sufficient justification for this procedure. Personally I have always felt that I was shirking a plain duty if I did not scrupulously observe this rule.

In the limited time at my disposal I have but briefly mentioned many interesting and essential phases of this most important subject. I will only add, in conclusion, that no matter how well qualified by knowledge and experience we may be for this line of practice, and regardless of the patience and skill which we may have employed in any particular case, unless the puerperium is kept under careful observation our duty has been but partially performed and all our efforts may come to naught. In localities where we are deprived of the services of competent and trained nurses and where we must be satisfied with those who are ignorant, superstitious, obstinate and negligent, daily visits cannot with any degree of safety be omitted. The storm of septic infection does not come all at once, but certain premonitory indications warn us of its approach, so that prompt and vigorous measures will often modify it favorably. I believe that the early recognition and treatment of septic symptoms will save many lives that would otherwise perish.

DISCUSSION ON DR. SOLIER'S PAPER.

By MRS. CHARLOTTE G. HAWK, M.D.,
Green River, Wyoming.

Mr. President and Members of the Profession:

This is a paper of unusual interest to me, as my work naturally, as you might suppose, falls into this line.

The puerperal state is unique in its position, "being on the borderland," as Lusk puts it, "between the physiological and the pathological."

Conditions which in the pregnant woman are physiological, under any other circumstances would be pathological. For instance, the congestion of the uterus in the early stages or the thrombi which form in the placental sinuses. But while these are physiological, yet it places the woman in a condition of danger, for the increased activity of the circulatory system renders the parts liable to take up any septic material that may find its way into the vagina, and the physiological thrombi may become pathological, with all its disastrous results if infected.

Statistics are alarming on these cases, and the worst of it is that it falls upon the most valuable class, mothers of families, whose loss is a national as well as a private one.

I do not like the use of vaseline as a lubricant, as I think it is liable to carry infective material. I prefer a good soap, carbolized for instance. I use the douche after confinement for cleanliness as well as comfort to my patient. But if I have not a reliable nurse I see to it myself, as there is a liability of something being carried in there that may infect.

REPORT OF A CASE OF FOXTAIL INFECTION.

By R. C. CHAMBERLAIN, M.D.,
House Surgeon, Wyoming General Hospital,
Rock Springs, Wyoming.

Through the kindness of Dr. R. Harvey Reed, superintendent and surgeon in charge, I have the pleasure of reporting to you a very interesting and unique case of foxtail infection. Foxtail, or squirrel-tail grass, as it is sometimes termed, is probably well known to most of you and will require but little description in connection with the report of this case. Suffice it to say that it grows in rather dense tufts of eight to twenty inches in height, with short, flat leaves and compact, elongated heads, or spikes, which are made up of a number of spikelets growing from a central stalk or stem. These spikes at maturity become disarticulated and the seeds, with their barbed beards, set free to be scattered hither and thither at the mercy of the winds. In this mature condition the beards become very tough and stiff, and owing to the angle at which the barbs grow from the beards, when they once enter a tissue they readily pass still deeper, carrying with them a poison, the exact nature of which has not been fully demonstrated.

So great is the havoc this grass plays among the horses and cattle of this state that Professor Nelson of the experiment station at the State University has just recently written a very interesting article in which he describes its botanical characteristics and habits, and its rapid growth in an alkali soil like ours. He also demonstrates the manner of infection and the nature of the injury inflicted, and very strongly urges its early extermination.

The intensity of the infection and the effect on the human economy is demonstrated somewhat clearly in the following case:

Peter B., age 35, male, white, single, laborer, was received at the Wyoming General Hospital from a west-bound train, August 27, 1898, by the order of Dr. H. M. Bennett, county physician, Rawlins, Wyoming. No history of the case could be elicited from the patient at this time more than that he was suf-

fering greatly and wished to be left alone. A few days later, however, when questioned closely, he said that on August 13, 1898, while riding on a load of hay from the field to the stack, he passed two heads of foxtail grass into the urethra, and when he attempted to remove them he was unable to do so. He could assign no reason for such an action further than that he was in a playful mood and did not know how to amuse himself otherwise. He experienced little or no inconvenience from this for three or four days, when the penis began to swell and he had difficulty in voiding his urine. He suffered in silence for a few days, during which time he deserted the "tie camp" and wandered off some twelve miles in the mountains, where he was discovered by his fellow laborers; ashamed, as he said, to approach his comrades or a physician, but was finally compelled to consult Dr. Bennett, with the result that as soon as satisfactory arrangements could be made, he was sent to the hospital.

On examination the extremities were found to be cold, the temperature 97 degrees F., the pulse 112, the tongue furred and the teeth covered with sordes. The abdomen was very tympanitic and the bladder greatly distended, as was demonstrated both by palpation and inspection. The penis was swollen to fully twice its natural size, when in the erect condition, while there was a marked phimosis with a white and very fetid discharge from the urethra. The scrotum was swollen to about the size of a large cocoanut, very hard and ecchymotic.

He was immediately catheterized and fully four pints of urine drawn off. A quarter of a grain of morph. sulph, with 1-150 grain of atropine was given hypodermically, followed with hot milk and whisky by mouth. A bichlorid evaporating solution* pack was applied to the penis and scrotum, which was supported by a T bandage; hot water bags were put to his feet and legs and he was covered with hot blankets. That night he was ordered morph. sulph. q. s. to secure rest and fractional doses of calomel, to be followed in the morning with salines. He rested fairly well and in the morning, after a thorough evacuation of the bowels, seemed brighter and more talkative. His temperature was 99½ F., and his pulse 115. He was ordered to be catheterized every eight hours and the bichloride pack continued. Tonic doses

* Bi-chlorid Evaporating Solution—80 parts boracic acid sol. 3 per cent.; 10 parts alcohol; 10 parts glycerine, and 8 drops of a saturated solution of bi-chlorid of mercury to the pint. The saturated solution used being 2 oz. hydg. bi-chlorid to 2 oz. of alcohol and 6 oz. of glycerine, 8 drops to the pint, which equals 1 to 3,500.

of quinine sulph. were ordered three times a day and 1-60 gr. of strych. sulph. every four hours; also whisky, egg-nog and milk punch.

On the third day after his admission the lower portion of the scrotum began to slough and a few days later the underside of the penis. Almost simultaneously there was an abscess formed just above and to the right of the symphisis pubis between the deep fascia and the abdominal muscles. On the fifth day after his admission his temperature fell to 94 degrees F. and ranged between 94 degrees F. and 97 degrees F. until several days after his operation, which was made on the tenth day after his admission.

Great quantities of tissues began to slough from the inner side of either buttocks, and a small abscess was formed a few inches down the left thigh. Stimulation was kept up vigorously, and, like the good Samaritan, antiseptics poured on abundantly, but to no avail.

On September 6th the entire scrotum had sloughed away, leaving the testes without a covering and thus invited septic material to follow up the cords. About one-half of the integument of the penis was gone and the penile portion of the urethra had sloughed an inch and a half in one place and a small opening in another. There was a cavity in the inner side of either buttocks into which the fist could easily be thrust and which involved all of the soft parts between the perineum and tuberosities of the ischii. Also one on the abdomen that would measure four by five and a half inches. Notwithstanding this intense infection there was no enlargement of the lymphatic glands, neither lymphangitis nor phlebitis. It was decided at this time that an operation was the only thing that would give the man any chance for his life, and accordingly he was anaesthetized, the cords were tied in the usual manner for a castration and the testes removed. The cavities were thoroughly curetted and flushed out, and several spikelets of the foxtail recovered from each sloughing focus. A packing of gauze saturated with a 10 per cent. solution of creolin was then inserted, and the dressings fixed with adhesive straps. A soft rubber catheter was passed into the bladder and fastened to the penis with adhesive so that by means of a rubber tube the urine was drained into a bottle, attached to the side of the bed. During the operation an attempt was made to take a picture showing the destruction that had taken place, but it proved to be

unsuccessful as the parts were not brought out clear and distinct. The evening following his operation his temperature registered 95 degrees F. and his pulse 84 and very feeble. The next morning it rose to 97 F. and the pulse was 86. The packing was removed and the cavities repacked with a 10 per cent. creolin solution. This treatment was continued with a few changes to meet the symptoms that arose until the tenth day after his operation, when his temperature became normal and his pulse 88.

The tonic treatment was kept up for about ten days longer, when his appetite became good, he slept well and began to grow fat. Since then he has received no internal medication. The stimulating dressings have been continued and the catheter changed each day.

At the present time the cavities in the buttocks have about closed, the one on the abdomen has completely repaired and he is able to walk about the ward. The phimosis still exists and but little repair has gone on in the penis, so that there is still a question as to what the ultimate termination of this organ will be. One of two things seems to be indicated, either to repair the urethra and bring the scanty integument together to cover it, and at the same time remove the phimosis, or to make a complete amputation. In either event I would be pleased to report the result at some future time. I also wish to say that during your visit to the hospital this morning the specimens and patient will be presented at the clinic.

Synopsis of Discussion on Report of a "Case of Foxtail Poisoning."

By R. HARVEY REED, M.D.,
Rock Springs, Wyoming.

The case just reported by Dr. Chamberlain on foxtail poisoning is certainly unique. As the doctor has described the plant and the particulars of this case in his paper, I will not take up your time repeating it. But I wish to call your attention to the peculiar features of the case and the peculiar action of this infection as manifested in this particular case. From the party's

own statement we are lead to believe that the foxtail was passed into the bladder through the urethera, and the spears having separated from the head of the foxtail, immediately commenced to penetrate the soft parts of the pelvis, a part of them escaping into the right iliac region, while the others escaped on each side of the urethra in the ischio-perineal region, destroying the soft parts until the ischium was exposed on either side.

Another "flock" of these barbs penetrated the scrotum, causing necrosis of not only the scrotum but of the testicles, all of which we were obliged to remove a few days after his admission to the hospital.

At this time we found about one and a half inch of the perineal portion of the urethra destroyed. It seems that wherever these little barbs, which are so arranged as to continue their course in a given direction, that direction depending upon the location of their point to a certain extent and also to the actions of the muscles through which they moved, that they continue to work their way onward until they meet some insurmountable barrier or set up such a terrific inflammation, followed with suppuration and necrosis, until their escape is effected.

Dr. Solier—Doctor, to what do you attribute the toxic effect of the foxtail poisoning?

Dr. Reed—I am sure, doctor, I am not able at this time to fully answer your question. I am inclined, however, to believe that, like any other foreign body, it sets up an irritation of the parts penetrated by it, and at the same time it carries with it whatever germs may have clung to it. From what little experience I have had I am not inclined to believe there is any specific poisoning in the foxtail itself, but owing to its peculiar formation it is capable of retaining in its meshes, so to speak, germs which would infect the parts which are in a condition to be infected, owing to the inflammation induced by the presence of this strange foreign body.

The history of the case clearly shows that the destruction of the soft parts came from the introduction of the foxtail, as the man admitted that he had introduced it, and the two operations which were made subsequent to his admission to the Wyoming General Hospital found the barbs of the foxtail in the soft parts where the greatest amount of destruction was going on. The removal of these barbs and the aseptic treatment resulted in the repair of the parts, notwithstanding the patient was greatly re-

duced, and for some four or five days his temperature remained at 94 degrees. His teeth were covered with sordes, and while he was usually a strong, robust young man, he was emaciated to a mere skeleton, but as you will see him when you visit the hospital to-day, he has now become fleshy, all evidence of the general septic infection having disappeared, and now we are simply waiting the repair of the parts. We expect to make a circumcision, which has become necessary owing to the cicatricial contraction induced by the inflammatory change, and after the recovery from the circumcision we intend to make a plastic operation, and if possible restore the urethra. What the result will be in this case remains to be seen.

We all know that this peculiar plant has a very hazardous effect upon stock that eats it, the barbs penetrating not only the soft tissues of the mouth, as well as the bone, but producing large ulcers, followed by necrosis of the bone, and at times when penetrating the intestines of the animal produces death from peritonitis, if not by septic infection when this does not occur. Whether or not this is due to the toxic effect of the plant itself or to its peculiar construction, which favors its passage through the soft and hard parts and carries germs, as has already been stated, I am unable to say, but one thing is certain, that its removal in the case which has just been reported by Dr. Chamberlain has been followed by a speedy and most remarkable recovery from a decicedly typhoid conditon with the lowest and longest continued low temperature that I have ever yet seen.

N. B.—Since the meeting of the Wyoming State Medical Society I beg to state that I performed the circumcision on the case, which healed by first intention, and a few days later restored the urethra by a plastic operation whereby we took the skin from either side of the perineal region, allowing the flaps to remain attached to the anterior portion of the pubes, bringing the two flaps together and making the line of suture along the natural position of the raphe. This required us to cut the flap from the ischial region, owing to the cicatricial tissue which we had to deal with in the region of the urethra, and after suturing the lateral edge of the flaps on either side to the cicatricial tissue, which was thoroughly denuded in the hope that we would get adhesions, we sutured the center along the line of the raphe, leaving the denuded surface to granulate. At present writing, a week after the last operation, the patient has not entirely recoverd, but the indications are favorable to a complete recovery.

ACUTE BRONCHO-PNEUMONIA IN CHILDREN.

By CHARLES PINCKNEY HOUGH, M.D.,

President of the Rocky Mountain Inter-State Medical Association, Member American Medical Association, Member Association of Military Surgeons of the United States, Member Medical Association of Montana, Member State Medical Society of Utah,

Salt Lake City, Utah.

Mr. President and Gentlemen—I will not trespass upon your valuable time with tedious and laborious references to pathological anatomy, physical signs and symptomatology in this most serious and frequent disease, it being a fair presumption that all are informed on those essential points upon which our text-books are quite agreed.

Broncho-pneumonia, usually designated catarrhal pneumonia, is essentially the pneumonia of infancy. It is a bilateral disease, and when fully developed gives scattered areas of dullness on percussion. In this disease we should bear in mind the double circulation of the lungs, that is, the functional and the nutritive, and also remember the pulse-respiration ratio common to infants in health, and as found in pneumonia; this is often the principal diagnostic feature early in the attack that attracts the attention of the observing and wide-awake physician, which, with a high temperature always expected, and circumscribed rales, is good grounds for apprehending this often insidious disease.

Nearly all cases of primary pneumonia in children under two years of age are of this kind, as are nearly all secondary pneumonias during childhood. In the primary affection the mortality is high on account of the age, and in the secondary form on account of the complications to which it is sequela. It is very infrequent after four years of age as a primary disease. Male children seem to be more subject to it, and about 70 per cent. of the cases occur in the winter and spring, children with poor hygenic surroundings being most frequently attacked. Exposure to cold and sudden atmospheric changes are still recognized as potent factors in its causation. To this fact I would especially ask your attention; you may protect some precious little ones if you still believe that people catch cold or catch hot, as you may choose to term it. Broncho-pneumonia as a sequela

to diphtheria is usually due to the streptococcus infection. In twenty-five cases reported by Netter, in which only one form of bacteria was present, in ten only the pneumococcus was found, in eight only the streptococcus, in five only the staphylococcus, and in two only the Friedlander bacillus. This observation of the different kinds of cocci by the microscope would suggest some factor of irritation preceding their activity.

In primary cases the pneumococcus is nearly always present and in a large per cent. of such cases it occurs alone. The mixed infection is common in secondary cases, while those that show the stpertococcus infection are usually the most severe. The cases resembling lobar pneumonia are usually due to the pneumococcus infection.

I think it would be wise if authors and teachers would discard all synonyms in writing and lecturing upon this disease. It would do away with much confusion in the minds of medical men. The more clear our understanding in pathology, the wiser and safer our therapeutics.

The rule is for the catarrhal inflammation to extend from the bronchial tubes to the bronchioles and air vesicles, yet in some cases the disease would appear to begin in the bronchioles and air vesicles at the same time. A very large per cent. of autopsies show very general disease in both lungs; while the pathological process may be arrested at any stage, death may also occur at any stage. Resolution sometimes takes place quickly, but when it is very slow, or only partial, there is likely to be recurring attacks, after which you may have chronic interstitial pneumonia. Pleurisy is almost invariably found over every large area of dullness after the fourth day, while autopsy in cases fatal on or before the third day show that up to that time the pleura is normal or only congested. Large serous effusions are rare in the pleural cavity, the disease is without typical course, while prostration is extreme from the beginning, cyanosis is usually present in some degree and is rarely absent before the fatal issue. Cough may be slight or absent, cerebral symptoms are often quite prominent. Physical signs are often few and slightly marked. Death has been reported within twelve hours after the attack, diagnosis being verified by autopsy. This type of the disease passes for malignant scarlet fever or measles, with suppressed eruption, or possibly as cerebro-spinal meningitis. We should not overlook this serious feature and should always exam-

ine the lungs in infants who are taken suddenly ill with embarrassed respiration, cyanosis or cerebral symptoms. The severity of the symptoms in these cases is explained by compression of the air vesicles from the intense engorgement of the tissues almost as much as from the exudates.

The treatment is largely a matter of individual personal experience, influenced for or against the patient in accordance with the good judgment and attention of the mother or nurse, as well as the therapeutic ability of the physician. A close clinical observer once said that in broncho-pneumonia we can do but little for the disease, but much for the patient. This being recognized to be most frequently a secondary pneumonia, we should not overlook the prophylactic measures in those diseases that are chiefly productive of broncho-pneumonia. The nose, mouth and pharynx should command our attention and be kept as clean as possible. The position of the patient should often be changed, and expectoration should be aided and encouraged. Tepid bathing and cold douching is recommended as an efficient agent in preventing broncho-pneumonia, or if it be in the incipient stage, checking its further development. By some the cold pack is preferred. The child should have a large airy room, with an even temperature of not less than seventy. The atmosphere should be kept somewhat moist with vapor. The diet should be nutritious and easily assimilable; the bowels should be freely moved, by preference with calomel. Alcohol or a combination of alcohol and strychnia should be given in sufficient amount to maintain a good heart action. The preparations of ammonia with expectorants, while condemned by some, are generally accepted as being beneficial. It is my custom to irritate the chest with mustard, afterwards freely apply camphorated oil, or simply use camphorated oil and turpentine, covering the chest with flannel or cotton wadding, not changing it until it becomes soiled from the excretions. I never use the oiled silk jacket, as I wish the full benefit of evaporation. I have much faith in diaphoresis in broncho-pneumonia. The kidneys receive my especial care. Since this is not a self-limited disease, and we cannot calculate as to its duration, I would urge especial attention to the diet and drink. A new fad in the diseases of infancy is to rely largely on the latter, to which I give my partial endorsement, believing it to act as an eliminant. As a rule children get too little water, especially when indisposed. I have confidence in quinia as a tonic in com-

bination with ammonia and digitalis. Aconite is an efficient remedy in the acute stage. I am wholly without experience with the cold bath and pack, but frequently resort to the hot mustard bath in threatened collapse or sinking, and have had from it prompt and happy effect. In reducing the temperature, cold to the head and sponging the face and upper extremities give good results. I have found it quite impossible to adopt in my family practice many highly praised hospital methods, and have believed it good judgment not to try to force methods of external treatment wherein I could not have the full co-operation of the family and the nurse. It is possibly mortifying to confess unfamiliarity with the highly commended antipyretics, the cold bath and the cold pack, but a due regard for truthfulness justifies the statement. When mucus accumulates and the patient cannot expectorate, an emetic of ipecac or alum is beneficial. Strychnia through central stimulation is said to aid expectoration. The alternating of the hot and cold douche is said to be efficient. Frequent cough frees the bronchial tubes, but if it be very annoying, I use small doses of antipyrin or tinct. opii camph. Oxygen gas is by some used with satisfaction, and the inhalation of creosote is said to be good. For extreme nervousness the bromides, antipyrin and phenacetin, are used, while for failing circulation I would commend the hot mustard bath, strychnia, nitro-glycerine, nitrite of amyl, or perhaps atropia of caffeine hypodermically. Good and intelligent nursing and feeding is in my opinion the great essential, and in this particular trouble I place as much confidence in wise and tender motherly care as I do in medication.

THE RADICAL TREATMENT OF DISEASE OF THE HIP-JOINT.

By CHARLES G. PLUMMER, B.S., M.D.,
Salt Lake City, Utah.

During the past two or three decades we have learned much in the treatment of disease of the hip-joint. Some of our knowledge is the direct result of years of research—yet more has the freshness and newness of the teachings of men of our own age.

The equipment of recent graduates in the theoretical treatment of this class of ailments is immense, but what they lack is the illustrated application. This we call experience. It is that something which we do not attain didactically—it only comes by personal contact.

This fact holds equally good with almost any subject we might mention, but it is especially impressed on our minds with reference to surgical procedures. There was a time, and it is not so far in the past that we cannot witness living examples of the fact, when cases of hip-joint disease went unrecognized. I do not say they do not go without recognition to-day—I wish I could. But, with the advent of new ideas, new methods have taught us more of the subject, and now fewer cases are overlooked than at any time in the history of surgery.

So much valuable time is lost in many cases by the diagnosis of rheumatism or "growing pains." And I am compelled to admit, in deference to those who treat the condition in its early manifestations from that standpoint, that their error seems excusable. For there is quite a similarity, in a general way, in the very early stages of the seizure. But when a diagnosis is made and treatment instituted and maintained, where the cardinal points which go to make up the diagnosis of hip-joint disease are in evidence, the mistake is culpable.

To be sure neurotic reflexes, with symptoms referable to the region of the hip and knee, such as preputial adhesions, anal fissures, or rectal ulcerations, have misled many most excellent men. I believe it is the search for some of these little things wherein lie our most pronounced successes. With their removal, or the elimination of their possible existence, our diagnosis is so much easier. Still, when we take into consideration the fact that the great majority of these cases occur in childhood, or early youth, we may be pardoned when we say we sometimes meet cases wherein a diagnosis is not easy.

Children are so apt to magnify their ailments, they are often so unmanageable and reticent that our diagnosis is almost wholly subjective. It is sometimes impossible to conclude positively that we have morbus coxarius from a single inspection and examination. It will pay us to keep the suspected case under close observation, seeing it perhaps every few days, with instructions to the family to look for certain prominent symptoms, upon which we are to base our conclusions.

We may not observe in any one case all the pathognomonic signs of the disease; still when we see the marked flexion and abduction of the limb, either in the prone or upright position, the limited motion, the apparent anchylosis at the hip, night pains and pains referred to the knee, we cannot miss it much by pronouncing it coxitis. Perhaps the subject has suffered some traumatism—perhaps not—it does not matter, for whatever the cause the treatment is identical.

In coming to the question of treatment, I wish to state that I believe all the successful methods of treating hip-joint disease today may be termed radical. That there are degrees of radicalism we cannot deny. Looking upon the results of treatment of these cases in the hands of some whom we might term anti-radicals, or extremists in conservatism, I am not much impressed with the wisdom of their medico-supportive and expectant methods. The physician who allows a case to progress so far as to permit of the formation of abscess in or about the region of the hip-joint makes a grave error. And to one who has not seen cases of advanced disease of this joint, he will find that he is totally unable to appreciate the terrific ravages such abscesses will commit. Extensive suppurative sinuses will penetrate the deeper structures of the hip and thigh, extending in some cases down the leg to the knee, forming large, bulging pockets of pus in the popliteal space, or above the patella; or they will burrow underneath the gluteal muscles across to the other side, or come out under Pourpart's ligament, or through the ischio-rectal region. And just as sure as hip joint abscess develops, deformity in some degree may be expected.

My experience has taught me that every deformity, by which I mean modified or absolute anchylosis with shortening resulting, is due either to abscess or neglect, and deferred treatment. Why is such deformity in evidence? Often because of the expectant and medicinal treatment of misguided conservatism.

Do not misunderstand me, please, for I believe in every endeavor to prove the value of conservative measures, but there comes a time when conservatism is not a synonym for good sense, when delay is dangerous, when hesitancy loses the day. For just such cases as these radical surgical procedure is necessitated.

Radical treatment means the institution of active surgical measures, as opposed to the delay, linger and wait methods of the ultra-conservative. My interpretation of radical advances begins with the use of injections of emulsions of iodoform, iodine, or any other drug into or about the joint cavity; or with extension alone; or with extension combined with hypodermatic injections at the site of the disease, or Vaughan's nuclein solution; or with resection of the head of the femur and thorough removal of all evidences of the disease.

I have purposely refrained from saying anything about the etiology of hip-joint disease, for I am certain we are a unit on that subject, if not entirely so, on that of treatment. My reading, and my own experience, convince me that morbus coxarius has its origin in the tubercle bacilli—hence it is merely a circumscribed tuberculosis. It does not matter whether there be a cachexia or not, or whether it result from a traumatism, I believe the cause always the same. One may not always be able to demonstrate the tubercle bacillus, he cannot find it every time he examines the sputum of a tuberculous subject; nevertheless, the existence of foci of disease, absolutely characteristic in every particular, proves the origin to be one and the same.

While the name of hip-joint disease is used to designate a tubercular inflammation of the hip-joint, it may have its origin in any one of three places: First, on the femur, called epiphyseal; second, acetabular; and third, arthritic, or synovial. If it begins, as is usual in the majority of cases, among children especially, in the epiphysis, the treatment must be more rapidly enforced, and of a much greater degree of severity. For my own convenience, I hav divided radical measures into three classes, viz.: First, injections of drugs into or about the joint cavity; second, the employment of extension; third, resection of the head of the femur.

In the first and second classes, as I have already indicated, we may use a combination of methods to suit the exigencies of the case, and to promote the best results. For instance, one would not give intra-articular injections of iodoform emulsion and allow the patient to perform his ordinary duties, because rest is one of the first considerations.

So, with a judicious use of the very best means combined, it becomes our function to save the vast majority of cases from the dreaded fate of the last degree of radical surgical procedure, viz., resection of the hip-joint.

Upon the recognition of a case of hip disease, no matter what the age of the patient, the tripod of success is, first, perfect immobilization with the Thomas splint; second, the prone position; third, extension. Without any other means whatever, I feel confident, in at least 90 per cent. of all cases, of securing the best results when the above rules are strictly adhered to, and intelligently carried out.

With the intra-articular and parenchymatous injection of a 10 per cent. emulsion of iodoform in glycerine, properly sterilized, we get better results than with a similar use of any other of the numerous solutions that have come before the profession. This treatment has been followed some years, but is, properly speaking, one of the weapons of modern surgery. Since the discovery that the tubercle bacilli existed in the so-called cold abscesses and joint affections, its employment has been more a matter of scientific application, with results directly proportionate to the thoroughness with which it is carried out.

Sometimes iodoform intoxication occurs among those who are particularly susceptible, but it is infrequent and rarely of much violence. Nevertheless, in its administration one should give but from twenty to thirty grains, according to the age of the patient, at the first treatment, and watch the effect. If the patient bears it well, it may be increased to a much larger dosage. After we are satisfied of the existence of disintegrating material, boldly plunge a small, perfectly sterilized canula into the capsule, or the body of the abscess, and draw off all the contents. Leave the canula in position, and with an aseptic rubber tube attached to it, thoroughly irrigate the interior with a warm Thiersch solution, or a 2 to 4 per cent. solution of boric acid. Continue irrigating until the returning solution is perfectly clear, then fill the cavity moderately full of the iodoform emulsion, remove the canula and place over the opening a close aseptic dressing.

The parenchymatous injection is about as effective as the intra-articular, and the same technique is employed.

In the hands of many surgeons balsam Peru, corrosive sublimate, iodine, carbolic acid, and arsenious acid have proven of more or less value in their anti-bacterial action. The violent inflammation set up by the most of these agents is a hindrance to their more general adoption, so that iodoform in glycerine is much more popular. Different operators publish a variety of

statistics on the employment of iodoform in this manner, some going so far as to absolutely deny any anti-bacterial action whatever, while others consider it the best and most curative agent in our hands.

As far as I am able to judge of its value in the few cases in which I have used it, I believe it has a definite, germicidal power, depending largely, as a cure, on the stage of the diseased process wherein it is used. True, I have not always found the tubercle bacillus in the gross discharges from such a condition—it is sometimes quite difficult; neither can we always attest the infallibility of the Widal test in typhoid fever; yet, to him who has come in contact with very many representatives of these diseases, the phases are so pertinent that a mistake in diagnosis is improbable. And we are certain, absolutely so, in spite of all the tests, that the above diseases exist, even when their bacilli cannot be demonstrated.

So much for the first method of treatment alone, which may be combined with the second, that of extension, and often to great advantage.

As I have previously declared, the success of treatment by extension depends on perfect immobilization of the affected part, and rest in the prone position, during the acute stages at least. I am unwilling to admit that a patient can do as well with the joint immobilized and be allowed to go about on crutches. The great requisite is rest for the joint, and also for the tissues enveloping it. No one can be sure of the entire absence of muscular, and even of joint motions, when a patient is in the upright position.

And it is this perfect rest, with separation of the diseased synovial membranes, upon which we base our assumptions for relief and cure.

We know full well how little motion or disturbance can be borne by the sufferer when we attempt to make an examination of the hip-joint without anaesthesia. It does not appear that age makes much difference; from extreme childhood to old age the excruciating agony they endure, upon the slightest motion, goes to show why perfect rest is best.

One of the best means for securing immobility is the Thomas splint, perfectly fitted, applied and maintained. I do not deem it always requisite to use this splint. In adult cases it is not needed as much as among children. When immobilization can

not be secured by ordinary bandaging for extension, then the Thomas splint is the best appliance known. Its use should be maintained after the acute stage has passed, and the patient is allowed to go about on crutches, with a patten under the foot of the well leg.

Another most beneficial agent incorporated in the armamentarium of the surgeon for the treatment of this condition is Vaughan's nuclein solution, as produced by Parke, Davis & Co. I have used it in conjunction with extension in a number of cases. In one case, male, aged 44 years, it was not administered hypodermically. I gave him the 5 per cent. solution by the mouth in rapidly increasing doses, until he was taking sixty minims four times daily. From the very beginning an attempt was made to thoroughly saturate him with the nuclein, and the happy results more than repaid us. A rapid decrease in the swelling about the hip-joint took place, the tenderness wholly disappeared, his appetite improved, and there was a complete subsidence of the usual train of annoying symptoms, that rarely in previous cases had been accomplished by extension alone. During the incarceration of this patient's hip-joint he gained over twenty pounds in weight. He had previously undergone amputation of the foot, on the same leg that now suffered from hip disease, for tuberculosis of the ankle.

At the time the extension apparatus was adjusted there were several small tubercular ulcers on the tibia above the stump; hence it was not without misgivings that radical treatment was instituted. And I feel compelled to admit that without such a powerful agent as Vaughan's nuclein solution, producing a vigorous leucocytosis, the result in this case could not have been good. The great increase in the disease-resisting power afforded the human body by such an element, its germicidal influence and antiseptic properties, recommend it very strongly to our consideration in these cases. Experimenters speak of it very highly also, in cases of mixed infection. Its use, either by the mouth or hypodermatically, is attended by no evil results. I presume I have given nearly 1,000 injections of it, and have had as yet no needle abscess, something one cannot say of all the various anti-toxins we use nowadays.

The third and most extreme measure adopted for the treatment of this disease, resection of the hip-joint, I have found it necessary to employ three times. It is so radical, and the de-

formity is so marked, that one hesitates to resort to it, often putting off the evil day, until he feels he is not doing the patient or himself justice. Some writers may deem it the only treatment employed that might be termed radical. To be sure, it is the extreme of radicalism, but is demanded in a certain class of cases.

There are degrees of severity of the invasion of the hip-joint by the tubercle bacillus, just as there are of any other diseases with which we come in contact. One type we can treat by a measure as radical as any other, because it singles out the cause and eradicates it; another, by means just as effective and as far-reaching, but perhaps not as brilliant; and a third by the last resort method, the sacrifice of more or less tissues, but the permanent removal of all growth interfering with local and general recovery.

Surgical good sense, for which conservatism is so often used as a synonym, and improperly so, should be the bulwark of every well and properly equipped operator. With a case in hand, one cannot go over the ground and make an operation of selection, for you have something to do other than a mere removal of the head of the femur.

The anatomical relations are so changed that one would scarcely recognize the vicinity, and the attack of the great, bulging, sloughing mass cannot be made upon any hard and fast lines.

The idea is to get to the seat of the trouble as rapidly as possible, and with the loss of as little tissue as is practicable, and, at the same time, be thorough. The simple resection of a practically normal case is nothing compared with what confronts one in a last stage case. The amount of pus that can burrow around the hip and pelvis, and the amount of disintegrated tissue that comes away through a free incision, is astonishing. The removal of all adjacent diseased tissue, and the scraping of all foci, is secondary to the rapid and careful resection of the head of the bone. Remove all signs of disease, but leave all the bone that it is possible to leave. In doing the section, leave the great trochanter, if possible; if it must be sacrificed, saw through it just above the lesser trochanter at an angle, thus maintaining the integrity of the muscular attachment for the great muscles of the thigh.

Notwithstanding the deformity which must result from the removal of such an important factor, it is neither as great nor as maiming as that which follows the usual suppurative processes involving the hip-joint, when allowed to heal by natural resolution.

Resection presents the horrors of an operation to patient and relatives. It also guarantees speedy and permanent relief from pain, but a permanent shortening. This shortening may be much or little, many times depending on the attending surgeon in his removal of tissue, also in his after treatment and care of the case.

If the case be young, we have every reason to believe that there will be a continuation of the growth of the femur, thus modifying more or less the permanent shortening.

In my experience, those who have endured this operation are lame only from the shortening. While in the result of a spontaneous cure, a very aggravating anchylosis and tilting of the pelvis accompanies it, with even a greater amount of shortening.

Much more might be said on this subject, cases could be cited of the various methods of treatment, and details pursued, but it is not pertinent at this time. I am satisfied that not all is accomplished by radical measures that should be expected. Still, with the improved methods at our hands, the greater knowledge of cause and effect, we may hope to accomplish much more than has ever before rewarded our efforts.

MEMBERS.

Abbott, H. A., - - - - - Rawlins, Wyoming.
Bennett, H. M., - - - - - Rawlins, Wyoming.
Crook, W. W., - - - - - - Cheyenne, Wyoming.
Carter, James, - - - - - - Carbou, Wyoming.
Chamberlain, Robt. C., - - Rock Springs, Wyoming.
Dunham, Frank, - - - - - Lander, Wyoming.
Freeman, W. C. C., - - - Rock Springs, Wyoming.
Gates, L. A., - - - - - - Thermopolis, Wyoming.
Hawk, Mrs. Charlotte G., - - Green River, Wyoming.
Hawk, Jacob W., - - - Green River, Wyoming.
Hammond, J. C , - - - Hanna, Wyoming.
Hale, R. W., - - - - - Otto, Wyoming.
Horton, F., - - - - - - Newcastle, Wyoming.
Johnson, W. L., - - - Rawlins, Wyoming.
Jolly, W. A., - - - - - - Rawlins, Wyoming.
Johnston, Geo. P., - - - Cheyenne, Wyoming.
Levers, Ernest E., - - - - - Almy, Wyoming.
Lane, James, - - - - Sweetwater, Wyoming.
Lott, John H., - - - - - - Buffalo, Wyoming.
Leeper, John F., - - - - - Casper, Wyoming.
Miller, Allen F., - - - - Sundance, Wyoming.
Maynard, H. J., - - - - - Cheyenne, Wyoming.
Osborne, J. E., - - - - - Rawlins, Wyoming.
Price, Sam T., - - - Grand Encampment, Wyoming.
Reed, R. Harvey, - - - - Rock Springs, Wyoming.
Russell, G. M., - - - - - - Dixon, Wyoming.
Ranch, E. P., - - - - - Rock Springs, Wyoming.
Stuver, E., - - - - - Fort Collins, Colorado.
Solier, C. H., - - - - - - Evanston, Wyoming.
Stoughton, Arthur V., - - - - Afton, Wyoming.
Verpoorten, M. H., - - - - Laramie, Wyoming.
Verbryck, Geo. G., - - - - Cambria, Wyoming.
Weaver, J. B., - - - - Dixon, Wyoming.

PRACTICE OF MEDICINE.

(Chapter 18, Session Laws 1899.)

An Act to regulate the practice of medicine, surgery and obstetrics in the State of Wyoming, and to repeal Chapter one of Title thirty-four of the Revised Statutes of Wyoming of 1887.

Be it Enacted by the Legislature of the State of Wyoming:

Appointment of Board

Section 1. That the Governor by and with the advice and consent of the Senate shall appoint three persons, who shall be electors of this State, who shall constitute the State Board of Medical Examiners. One of the persons so appointed shall hold his office for four years, and the other two for two years, and until their successors are appointed and qualified: Provided, That the first Board shall be appointed upon the passage of this Act, and shall consist of one member for four years and two members for two years, and in each succeeding legislative year there shall be appointed one member for four years and one member for two years. And provided further, That all vacancies occurring in the Board of Medical Examiners, by death, resignation or removal from the State or otherwise shall be filled by appointment by the Governor and the person so appointed to fill any such vacancy shall hold his office until the expiration of the term he was appointed to fill. No person shall be appointed a member of the State Board of Medical Examiners who is not eligible to registry in accordance with this Act.

Terms

Vacancies

Qualification

Organization of Board

Oath

Sec. 2. The State Board of Medical Examiners shall organize within sixty days after their appointment by taking and subscribing an oath to faithfully discharge the duties of the office, and by the election of a President, Secretary and Treasurer. It shall provide itself with such blanks and certificates as are necessary to comply with the provisions of this Act, and with an appropriate seal, which shall be attached to all certificates and orders issued by the Board. Said oath shall be filed with the Secretary of State.

Duty

Sec. 3. It shall be the duty of the State Board of Medical Examiners to pass upon the qualifications and determine the fitness of all persons who may desire to practice Medicine, Surgery or Obstetrics, or who may publicly profess to cure or treat disease, injury or deformity in any manner whatever in this State.

Requirements of practitioners

Sec. 4. Every person practicing Medicine in any of its departments shall possess the qualifications required by this Act. If a Graduate in Medicine, he shall present his Diploma to the State Board of Medical Examiners for verification as to its genuineness. If the Diploma is found to be genuine, and issued by a Medical College of recognized merit, said College being a member of the American Association of Medical Colleges, the Homeopathic Institutes or the National Eclectic Medical Association, or any College of similar standing in foreign countries, and if the person named therein be the person claimed and presenting the Diploma, the State Board of Medical Examiners shall issue its certificate to that effect, signed by the majority of all the members thereof, with the Seal of the Board attached, and such Diploma and certificate shall be conclusive as to the right of the lawful holder of the same to practice medicine in this State; Provided, no person holding Di-

Diplomas

Certificate

plomas, certificates or other credentials from schools or institutions other than those of recognized merit, as specified in this Chapter, shall be permitted to practice in this State until he has passed a satisfactory examination before said Board. Said examination may be in whole or in part in writing, and shall be of an elementary and practical character, and shall be upon the subjects following: Anatomy, Physiology, Chemistry, Pathology, Materia Medica and Therapeutics, Hygiene, Theory and Practice of Medicine, Surgery and Obstetrices, and sufficiently strict to test the qualifications of the candidate as a practitioner. For the said examination a fee of twenty-five dollars shall be paid by the candidate to the Treasurer of said Board.

Examination

Fee

Sec. 5. The State Board of Medical Examiners shall receive through its Secretary applications for certificates and examination. The President, or acting President, shall have the authority to administer oaths, and the Board may take testimony in all matters relating to their duties; they shall issue certificates to all who furnish satisfactory proof of having received Diplomas as provided in Section four of this Act. The Board shall prepare certificates for those entitled thereto. Said Board shall hold annual meetings, and in selecting places to hold their meetings they shall, so far as it is reasonable, accommodate applicants residing in different sections of the State, and due notice shall be published of all their meetings.

Power of Board

Meetings.

Examination of diploma. Fee

Sec. 6. Said State Board of Medical Examiners shall examine Diplomas as to their genuineness and character, and if the Diploma shall be found genuine as represented and of a character hereinafter provided, said Board shall receive a fee of five dollars from each graduate, and no further charge shall be made to the applicants except the fee for recording the same, as hereinafter provided. In case of application made by any person holding a Diploma, as required by Section five of this Chapter, for a certificate to practice within the State, it shall be sufficient for the applicant to present such Diploma and proofs to the Secretary of such Board, and if such Board be not then in session, such Secretary shall inform the members of the Board of such application, by writing or otherwise as will be most practicable, of the facts upon which such application is based, and thereupon such members shall in writing, advise such Secretary as to whether such application be allowed or rejected and, if allowed, the certificate shall be issued as in other cases in this Chapter provided. The verification of the Diploma shall consist in the affidavit of the holder and applicant that he is the lawful possessor of the same, and that he is the person therein named. Such affidavit may be taken before any person authorized to administer oaths, and the same shall be attested under the hand and official seal of such officer. Graduates may present their Diplomas and affidavits as provided in this Act, by letter or by proxy, and the State Board of Medical Examiners shall issue its certificate the same as if the owner of the Diploma was present.

Verification of diploma

Presentation of diploma

Certificate without diploma

Sec. 7. The Board shall be permitted to issue a certificate to any person who has not a diploma from some recognized college as contemplated in this Act, but who has been actually engaged in the practice of medicine for a period of ten years, the last five of which shall have been in this State, upon the payment of five dollars, and mak-

ing application as set forth in Sections four and six of this Act, and filing proof by affidavit or otherwise, to the satisfaction of such Board, setting forth the place of residence, time and places wherein such applicant has practiced, and showing such applicant to be a person of good moral character and sobriety.

Fraudulent diploma

Sec. 8. Any person who shall make application to such Board for admission to practice upon Diploma, and such Diploma be found to be fraudulent, or not lawfully owned by such person, such person shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be fined in any sum not exceeding one hundred dollars, or be sentenced to imprisonment for not more than thirty days, or punished by both such fine and imprisonment, in the discretion of the Court.

Penalty

Record of certificate

Sec. 9. Every person holding a certificate from the State Board of Medical Examiners shall have it recorded in the office of the County Clerk of the County in which he resides, and the date and place of record shall be endorsed thereon. Any person moving to another County to practice shall procure an endorsement to that effect on the certificate from the County Clerk, and shall record the certificate in like manner in the County to which he removes; and the holder of the certificate shall pay to the County Clerk the usual fees for making the record.

County record of certificates

Sec. 10. The County Clerk shall keep in a book provided for that purpose, a complete list of all the certificates recorded by him, with the date of the issue. If the certificate be based on a Diploma, he shall record the name of the Medical Institution conferring it, and the date when conferred.

Medical fund

Sec. 11. The fees received by the State Board of Medical Examiners shall be kept in a fund to be known as the Medical Fund, and subject at all times to the warrant of the State Auditor, drawn upon written request of the President, and attested by the Secretary of the Board, with the Seal attached, for the payment of any and all expense made by said Board.

Expenses

Revocation of certificates

Sec. 12. The State Board of Medical Examiners may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and they may revoke certificates for like causes. In all cases of revocation, the applicant or practitioner may appeal to the District Court of the County in wich such revocation is made which shall have power, after examination into the matter, to revoke the action of the Board.

Emergency

Sec. 13. Nothing in this Act shall be construed to prohibit students from prescribing under the immediate supervision of preceptors, or to prohibit gratuitous service in case of emergency, and this Act shall not apply to Commissioned Surgeons of the United States Army and Navy, or Medical Examiners of relief departments of railroad companies, while so employed, or any lawfully qualified Physicians residing in other States or Countries meeting registered Physicans of this State in consultation, or any Physician or Surgeon residing upon the border of a neighboring State, and duly authorized under the laws thereof to practice medicine and surgery therein, whose practice extends into the limits of this State.

Physicians from other States

Practicing without certificate

Sec. 14. Any person practicing medicine or surgery in this State without complying with the provisions of

Penalty

this Act, shall be punished by a fine of not less than fifty dollars, nor more than three hundred dollars, by imprisonment in the County jail for a period of not more than one year, or by both such fine and imprisonment for each and every offense, and each person filing or attempting to file as his own the Diploma of another, or a forged affidavit of identification, shall be guilty of felony, and upon conviction, shall be punished by imprisonment in the penitentiary for a term not to exceed (3) three years.

Midwifery

Sec. 15. The State Board of Medical Examiners shall examine all persons upon the theory and practice of Obstetrics who openly profess to practice obstetrics and midwifery, who do not have authority to practice medicine or surgery; and they may issue to such candidates and person or persons who shall pass a satisfactory examination, certificates which shall authorize and empower them to practice obstetrics or midwifery. No person shall practice obstetrics or midwifery unless either a Practicing Physician authorized to practice under the provisions of this Act, or holding such certificates as are prescribed by this Section; Provided, that nothing in this Section shall be construed to prohibit persons from rendering services in cases of obstetrics or midwifery in cases of emergency.

Emergency

Itinerants prohibited

Sec. 16. Any itinerant who has not qualified as hereinbefore provided, who shall sell or offer for sale any drug, nostrum, ointment or appliance of any kind intended for the treatment of any disease or injury, or shall by writing, printing or other method, except by ordinary professional card or sign, publicly profess to cure or treat disease, injury or deformity by any drug, nostrum or in any manner whatever, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined in any sum not less than fifty dollars nor more than one hundred dollars, and costs of prosecution, for each offense, and shall be committed until such fine and costs are paid.

Penalty

Secretary's salary

Sec. 17. The Secretary of said Board shall be paid a salary which shall be compensation for the actual work done in the performance of the duties of his office, the amount thereof to be fixed by the Board, not to exceed the sum of fifty dollars per annum, the same to be paid out of the Medical Fund by warrants drawn by the State Auditor, upon there being filed with the Auditor a certificate to be signed by the President and Secretary of the Board, with the seal of the Board attached, showing that the Secretary has acted in that capacity for the time for which his bill is presented. The salary shall be paid annually. The members of the Board shall receive the sum of five dollars per day while actually employed in attending meetings of the Board, or in carrying out the provisions of this Act, and shall also receive their actual traveling and necessary expenses while engaged in the performance of their said duties to be paid out of the Medical fund upon warrants to be issued by the State Auditor, and all bills therefor shall be accompanied by a certificate signed by the President and Secretary of the Board, with the seal of the Board attached, attesting the correctness of the bill.

Board's salary

Repeal

Sec. 18. All Acts and parts of Acts inconsistent with the provisions of this Act are hereby repealed.

Sec. 19. This Act shall take effect and be in force from and after its passage.

Approved February 14th, A. D. 1899.